

# User Guidance for the Rights-of-Way as Habitat Database System



This document serves as a visual “how to” manual for interacting with the ROW as Habitat database system. As additional workflows are developed this guide will continue to expand with new and updated information. Please check the version you are using to be sure it is up to date. The most recent version is available via the Rights-of-Way as habitat Working Group website... <http://rightofway.erc.uic.edu/wp-content/uploads/Database-User-Guidance.pdf>

If you have any questions and/or need support after consulting this document, please use the “Contact” web form at the Rights-of-Way as Habitat Working Group website... <http://rightofway.erc.uic.edu>

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# Overview

The Rights-of-Way as Habitat Working Group (ROWHWG) is a unique collaboration of professionals from across multiple sectors, including gas, electric, rail, and road industries. The group includes biologists, foresters, engineers, environmentalists, lawyers, educators, and other stakeholders interested in supporting habitat on rights-of-way and other working landscapes and represents more than 200 organizations from across private industry, government agencies, non-profit organizations, and academia in the United States and Canada. For more information, visit their website at:

<http://rightofway.erc.uic.edu>

One of the early priorities identified by the ROWHWG was the need for a system that organizations can use to collect data on pollinator habitat managed on rights-of-way (ROW) and other landscapes across the United States. This system was developed by the Keller Science Action Center at the Field Museum in partnership with the Energy Resources Center at the University of Illinois at Chicago and with support from a host of beta testing organizations and general feedback from the ROWHWG community.

## Core Purpose of the System

The Rights-of-Way as Habitat database system serves as a central repository for tracking existing, restored, and potential habitat areas to further our understanding of the ecological benefits and opportunities of rights-of-way. This database system aims to facilitate conservation partnerships within and across sectors, supports engagement with resource agencies to help avoid future listings under the Endangered Species Act, and works to promote voluntary conservation actions for at-risk or listed species.

## Key System Requirements

The Rights-of-Way as Habitat database system established a set of key system requirements including:

- Capacity to support many organizations
- Ensure data sensitivity and privacy requirements
- Allow for and promote data sharing
- Consist of self-maintained datasets
- Support field data collection
- Provide tools for bulk data upload
- Enable public and private reporting
- Have an automated system administration

This system was developed using geospatial software created by Esri. Participating organizations are not required to have their own Esri software licensing to contribute data and participate in using this system, since no-cost user accounts and no-cost desktop licensing options are available. To participate, organizations should visit the ROWHWG website (above), where they can complete an online ROW Database Intake Questionnaire. Once approved,

organizations will be provided with user accounts and access to the database system, including a set of objects (maps, tools, and other services) to securely record managed land areas and conservation activities related to promoting pollinator habitat. Detailed options exist for excluding or sharing datasets with other participating organizations and the public. After an organization completes the registration process, an ArcGIS online (AGOL) account is deployed that delivers the customized set of objects.

Each organization receives an identical set of AGOL objects, but each set is customized for that organization in terms of security and access to feature data. Users from each organization have visibility only to their own groups, their own data, and data shared by other organizations.

## Database Concepts

In order to establish data consistency across multiple sectors and organizations, a common set of database features was developed to represent and record rights-of-way land areas and conservation management practices. The following term definitions and descriptions are designed to help you make decisions about how to import, manage, and capture your data. For more information, please refer to the document *Sites vs. Management Areas...*

<http://rightofway.erc.uic.edu/wp-content/uploads/Sites-vs.-Management-Areas.pdf>

### Key Database Terms

**Sites** are land areas (e.g., parcels or groups of parcels) where *Conservation Measures* are tracked on an individual basis with location-specific measures.

**Management Areas** are land areas managed programmatically (as a group) with similar *Conservation Measures* across several locations.

**Pollinator Scorecard** points are locations where an assessment has been performed at one of three monitoring levels (tier 1, 2, or 3) to assess pollinator habitat quality.

**Conservation Measures** are the specific conservation actions that are taken (e.g., conservation mowing, selective herbicide treatments, native seeding, etc.) on a land area.

**Programs (for Management Areas)** are used to apply one or more *Conservation Measure(s)* across *Management Areas*. This is the only way to specify *Conservation Measures* on *Management Areas*. Multiple *Management Areas* can be designated under one program if they share the same management properties (e.g., type, frequency, etc. of conservation actions). These *Programs* also serve as “sampling groups,” so that *Pollinator Scorecard* points across similar *Management Areas* in a *Program* can be evaluated together.

**Programs (for Sites)** are used solely to define “sampling groups.” In this case, *Programs* do not allow for information on *Conservation Measures*, since this is already defined individually for each *Site*. A *Program* can be assigned to a single *Site* (unique) or assigned to a cluster of *Sites* (grouped) if an organization wishes to evaluate *Pollinator Scorecard* points across a set of similarly managed *Sites*.

## Sites & Management Areas

An important determination your organization will need to make is whether land areas managed for habitat should be entered as “Sites,” as “Management Areas,” or as a combination of each. *Sites* are land areas (e.g., parcels or groups of parcels) managed individually, which allows for the most detailed, location-specific data tracking of what conservation actions (recorded in the *Conservation Measures* table) have been applied to which land areas. In this case, *Conservation Measures* are recorded for each location individually and include details such as the type of measure applied, implementation organization, implementation status, implementation frequency, and the activity start and end dates. Organizations can also record the percentage of the *Site* on which a *Conservation Measure* was implemented (e.g., conservation mowing occurred on 30% of the *Site*).

Alternatively, *Management Areas* are land areas managed as a group at a programmatic scale, which allows for tracking conservation actions across multiple land areas, and thus does not allow for detailed, site-specific information. When working with *Management Areas*, organizations first develop a “Program,” which is associated with a set of *Conservation Measures*. This *Program* is then applied to a selected set of *Management Areas*, so that all of the *Management Areas* in a given *Program* share the same *Conservation Measures*. The table below illustrates which *Conservation Measure* attributes can be identified for *Sites* and *Management Area Programs*.

### Comparison of Conservation Measure Attributes by Sites and Management Area Programs

Conservation Measure Attribute	Can be Identified for Sites?	Can be Identified for Management Areas through Programs?
Conservation measure (e.g., seeding and planting, conservation mowing, targeted herbicide, etc.)	✓	✓
Implementation organization (i.e., organization responsible for implementing the conservation measure)	✓	✓
Implementation status (dropdown options: implemented, not yet implemented)	✓	✓
Implementation frequency (dropdown options: one-time occurrence, more than once a year, annually, once every 2 years, once every 3-5 years, once every 6-10 years)	✓	✓
Percent of Site in which measure was applied (e.g., conservation mowing occurred on 65% of the Site)	✓	
Activity start date	✓	✓

Activity end date	✓	✓
Notes	✓	✓

## Pollinator Scorecard

*Pollinator Scorecard* points are locations where an assessment has been performed at one of three monitoring levels (tier 1, 2, or 3) to assess pollinator habitat quality on managed lands. The attribute fields in the *Pollinator Scorecard* point feature class are based on the Rights-of-Way as Habitat Working Group Pollinator Scorecard, presented by the Metrics & Targets Task Force. For the purposes of the Pollinator Scorecard, pollinator habitat is defined as containing native flowering plants, host plants, and nesting sites, throughout the growing season. See the Pollinator Scorecard User's Guide (available at <http://rightofway.erc.uic.edu/pollinator-habitat-scorecard>) for more details.

The Pollinator Scorecard is designed for flexibility with an understanding that rights-of-way managers may have different objectives for using the Pollinator Scorecard and varying levels of access to resources and expertise for pollinator habitat assessment. Therefore, the Pollinator Scorecard was designed with a multi-tiered approach to support all rights-of-way managers in habitat evaluation. Tier 1 surveys are intended for anyone with minimal training and provide a "Yes/No" habitat determination. Tier 2 surveys are intended for users with some training and provide a qualitative rating of pollinator habitat and management score. Tier 3 surveys are intended for more advanced users and provide a qualitative rating of pollinator habitat including a list of species present and metrics per species as well as a management score.

*Pollinator Scorecard* assessments can be evaluated for either a single location or across multiple land areas that share the same or similar *Conservation Measures*. To do this, all *Pollinator Scorecard* points are automatically assigned to the *Site or Management Area's Program* they overlap with (if any) during nightly database validation checks. Many points can be assigned to the same *Program*. Each *Program* is associated with one of the following: a single (unique) *Site*, multiple (grouped) *Sites*, or *Management Areas*. As previously mentioned, for *Management Areas*, these *Programs* are also used to identify a shared set of *Conservation Measures*. For *Sites*, *Conservation Measures* are defined at the individual *Site* level. Thus, *Programs* are used solely for assigning *Pollinator Scorecard* points to either a single location (Unique *Site*) or multiple areas (Grouped *Sites*) that share similar management practices, even if the specific details of the *Conservation Measures* (e.g., organization that implemented the activity) are different or are tracked independently.

# ArcGIS Online (AGOL) System

Organizations that have completed the ROW Database Intake Questionnaire can be “deployed” as new organizations in the Rights-of-Way as Habitat database system. Once deployed, the Account Administrator, Data Manager, and (if enabled) Generic Fieldworker will receive a welcome email with a link to a new ArcGIS Online account. See *Database User Accounts* in the next section for the distinctions between these account types. If you invited any Fieldworkers with existing ArcGIS Online accounts through the intake questionnaire, they will not receive an email notification. These Fieldworkers will need to log into their ArcGIS Online account and accept the invitation (see *Inviting additional users and accepting Invitations* below) in order to access field mapping applications (e.g., Survey123 and Collector for ArcGIS) on mobile devices.

## Database User Accounts

All database accounts are provisioned through the ROW as Habitat ArcGIS Online website. After completing the Intake Questionnaire and approval, new organizations are deployed with Account Administrator and Data Manager accounts. Additional user accounts (at all levels) can also be requested via the *Additional ROW-HWG Users Form*, (<https://bit.ly/2Y1jRof>). The following describes in more detail the differences between all 3 types of accounts available to organizations.

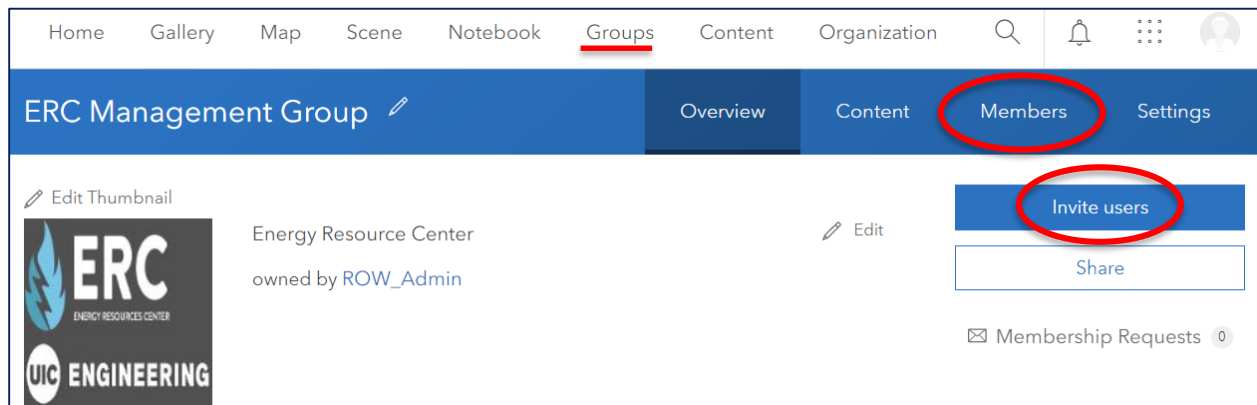
**Database Account Administrator** This account holder is the primary contact for account administration decisions. This person has the ability to authorize new users to both the Fieldwork and Management groups (described below) and can set up and modify collaborations with other organizations. Normally we assign only one database Account Administrator, but it is possible to request more. This user will be assigned a new account in the ROW ArcGIS Online System with an ArcGIS Pro Desktop license included (for use with the ROW Database only).

**Data Manager** These account holders typically handle your organization’s data management and could be a staff member or an authorized consulting company. Like the Account Administrator, Data Managers have full access to all data and geospatial tools, and have the ability to invite existing ArcGIS Online users to the Fieldwork group (described below). One person can serve as both Database Account Administrator and Data Manager. This user will be assigned a new account in the ROW ArcGIS Online System with an ArcGIS Pro Desktop license included (for use with the ROW Database only).

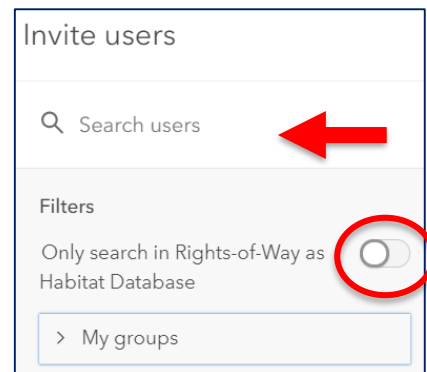
**Fieldworker** These accounts are intended for staff or contractors that plan to use the ROW as Habitat field applications such as Survey123 for collecting Pollinator Scorecard monitoring data, or Collector for ArcGIS for capturing boundaries. We provide one generic (shared) Fieldworker account if requested in the Intake Questionnaire, or if your field staff already have ArcGIS Online organizational accounts, these can either be specified in the intake questionnaire, or they can be invited through the AGOL interface by an Account Administrator or Data Manager. Typically, Fieldworkers only access the system via mobile field applications, but desktop data entry is also possible using online versions of the mobile applications.

## Inviting additional users and accepting Invitations

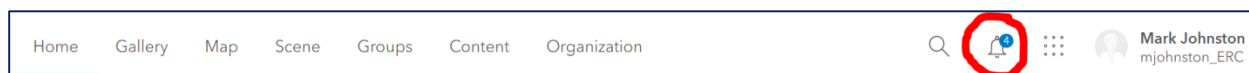
If you are logged in as the Account Administrator, you can “invite” users with existing organizational accounts into the Data Manager Group and/or the Fieldwork Group. Similarly, as a Data Manager, you can invite users with existing organizational accounts into the Fieldwork Group. Click on Groups and select the group where you want to invite new users. Once inside the group, you can view exiting members using the “Members” tab, and add members using the “Invite users” button as shown in the example below.



After clicking on the “Invite users” button, you need to turn off the slider under “Filters” that only searches for members inside the ROWHWG system (see right), and then enter the AGOL user name that you want to add. Note that the account you are adding must be an AGOL organizational account (personal accounts are not recognized).



To accept an invitation, after logging into their own organization's ArcGIS Online system, fieldworkers should see a bell icon on the Home screen as shown below (circled in red). After clicking on the bell icon, they can follow the link to join the Fieldwork group.

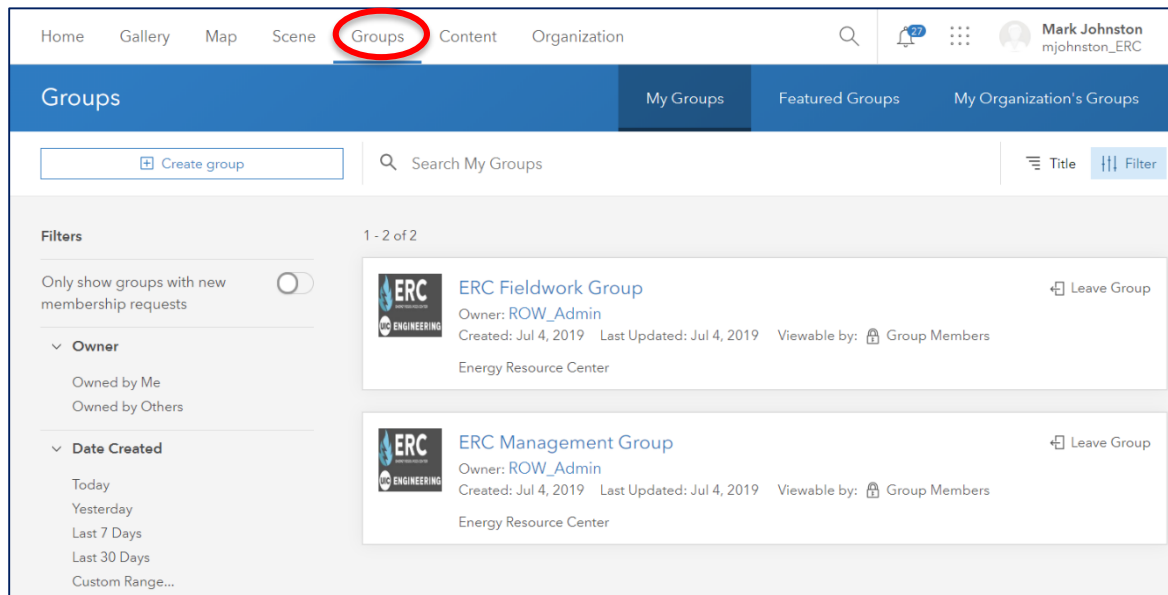


## Managing Groups and Members

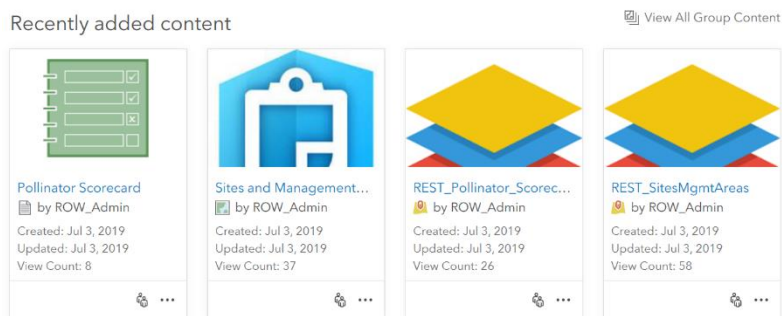
After logging into the ArcGIS Online ROW as Habitat database system, click on the Groups menu to see the group(s) you have access to. Account Administrators and Data Managers will have access to a “Management Group” for your organization and, along with Fieldworkers, will



also have access to a “Fieldworker Group”. Below is an example of a Management Group and Fieldworker Group for the “ERC” organization.

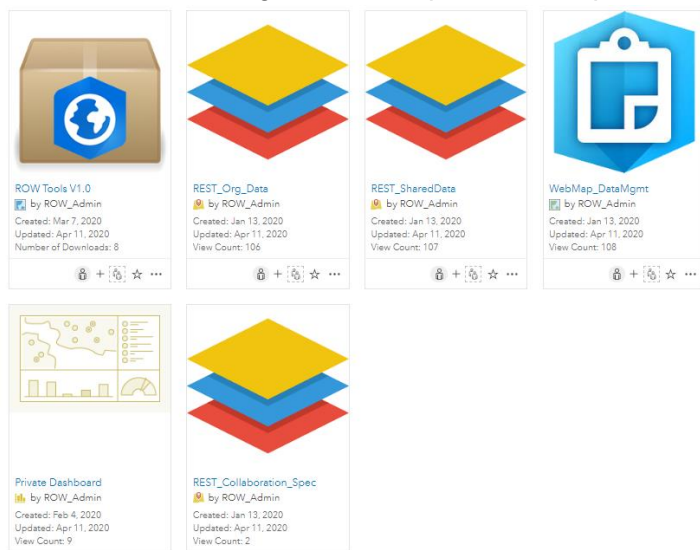


**The Fieldworker Group** provides access to the *Pollinator Scorecard* form and a fieldwork-level WebMap, with only the essential fields needed by Fieldworkers. The *Pollinator Scorecard* is accessed via the Survey123 app, downloaded for free on various mobile platforms, and allows users to enter detailed habitat information using a GPS-enabled form. The “Sites and Management” WebMap can either be opened in ArcGIS Online or accessed on mobile devices via the Collector app for online or offline use. The Collector WebMap is primarily designed for collecting *Management Areas* and *Sites* boundaries. Both of these applications are supported by the REST-endpoints, which should not be interacted with directly. Directions for using the Survey123 and Collector applications are provided below.



**The Management Group** provides access to all data fields and records in the database system via an administrative-level WebMap. This Group also contains an ArcGIS Pro project called “ROW Tools,” which is used primarily for importing data into the online database system and for managing *Conservation Measures* and *Programs*. The REST-endpoints (e.g., REST\_Org\_Data, REST\_SharedData) are direct links to the data on the server and can be used to view organizational ArcGIS Online data in ArcGIS Pro (see [Accessing your ArcGIS Online data](#)). The

Management Group may also contain access to a Private Dashboard for performing data analytics and a WebApp for data review. Administrators have the ability to edit and create new content in the Management Group. See example content below.

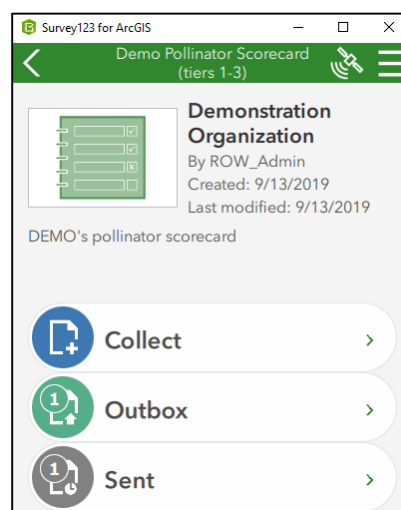


## Field Work Data Collection Applications

### Using the Pollinator Scorecard (Survey123 form)

On your phone and/or tablet, install and open the Survey123 app using the app store. Sign in and download the Pollinator Scorecard survey in your organization's Fieldwork Group folder.

Click Collect to start a new survey to capture pollinator habitat information. When submitting, you will have the option to **Send Later** (e.g., if there is no internet access) in which case a copy is saved in the app, **Send Now**, or **Continue this survey**. If you choose to **Send Later**, click the Outbox to send the surveys that were completed, but not sent. Once surveys are sent, you can click Sent to see submitted surveys, edit them, or copy the information into a new, blank survey.



The following screenshots show the examples of the field collection form. Fields with a red asterisk (\*) are required. Evaluators should fill in the date of the survey, their name and organization, the name, location and acres of the Site or Management Area they are within, the type of survey they are conducting, and the survey tier they are using. Depending on the tier selected, the user will be prompted with fields that correspond to that tier's scorecard. Sections include: Plot Information (for details about the plot including photos), Habitat Attributes (for details about the habitat), Scoring (for tier 2 and 3 surveys), Management (for tier 2 and 3

surveys to note threats and opportunities), and any notes. Click the check mark at the bottom to submit.

**Survey123 for ArcGIS**

**Pollinator Scorecard**

**Survey Tier \***  
Please select the assessment tier you are using. The selected tier will determine what data fields are visible/required

☐ Tier 1: Basic

☒ Tier 2: Qualitative

☐ Tier 3: Detailed

**Plot Information**

Collect the GPS coordinates of your plot \*

**Start Time \***  
The start time for plot assessment

Time

**Plot Number \***  
A unique identifier for the plot

**Plot Location \***  
The coordinates of the plot and/or sufficient information to re-identify the plot in subsequent visits

**Plot Description \***  
A general description of the plot, including the type of right-of-way it is located in, the

**Habitat Attributes**

**Potentially Flowering Nectar Plant Cover \***  
Estimate the percent cover of potentially flowering nectar plants (e.g., wildflowers and shrubs), whether flowering or not

☐ 0% (0 Points)

☐ 1-5% (1 Point)

☐ 6-10% (7 Points)

☐ 11-25% (14 Points)

☐ 26-50% (21 Points)

☐ 51-75% (28 Points)

☐ 76-100% (35 Points)

**Additional Habitat Resources \***  
Check any habitat resources that are present. Each selection is worth 2 points.

☐ Native bunch grasses

☐ Brush piles

☐ Undisturbed thatch

☐ Dead wood/snags

☐ Rock piles

☐ Basking areas

☐ Plants with hollow pithy stems

☐ Larval host plants (e.g., milkweed)

**Notes on Habitat Resources**

**Pollinator Score**

**Total Score:**  
0

**Habitat Quality Rating:**  
Improvement Opportunity

**Management**

**Threats**  
Check for any threats identified on or adjacent to the plot

☐ Lack of direction or objectives for managing habitat

☐ Negative perception of habitat

☐ Woody encroachment

☐ Invasive species

☐ Habitat conversion (e.g., habitat loss, land disturbance)

Frequent grazing, mowing or herbicide use during the growing season

☐ Adjacent land use encroachment (e.g., unauthorized land uses)

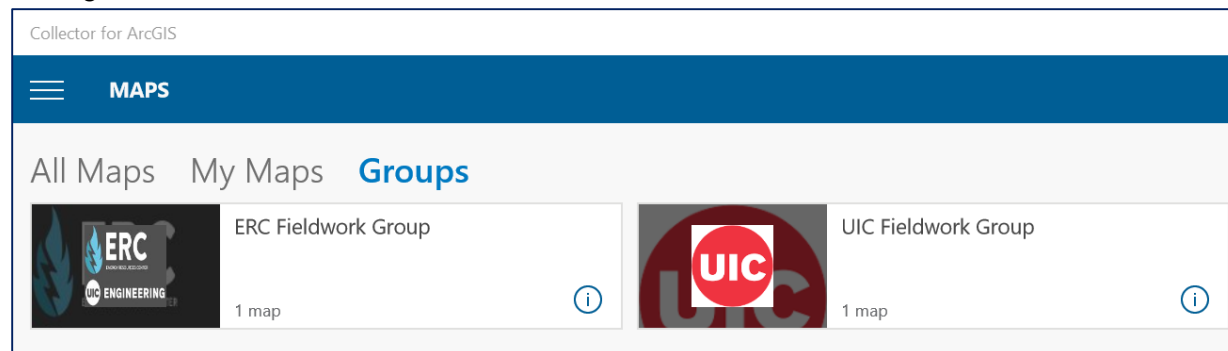
☐ Adjacent land use impacts

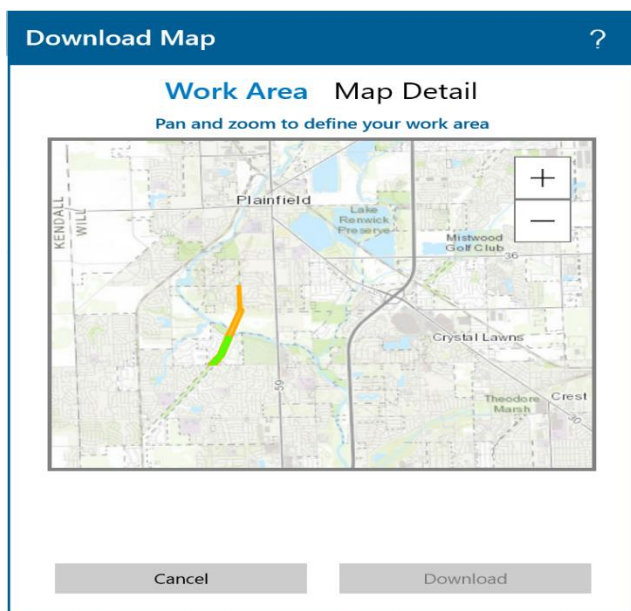
☐ Other (describe)

**Opportunities**  
Check for any opportunities identified on or adjacent to the plot

### Collector for ArcGIS or Collector Classic

On your phone and/or tablet, download and open either the Collector for ArcGIS or Collector Classic app, depending on your preference (both are free downloads). After logging into Collector, you can view maps available to you by “Groups.” If you are a contractor for more than one organization, this display will help you edit and add data for the correct organization (see screenshot below). Inside the group you select you should see a map called “Sites and Management Areas.”

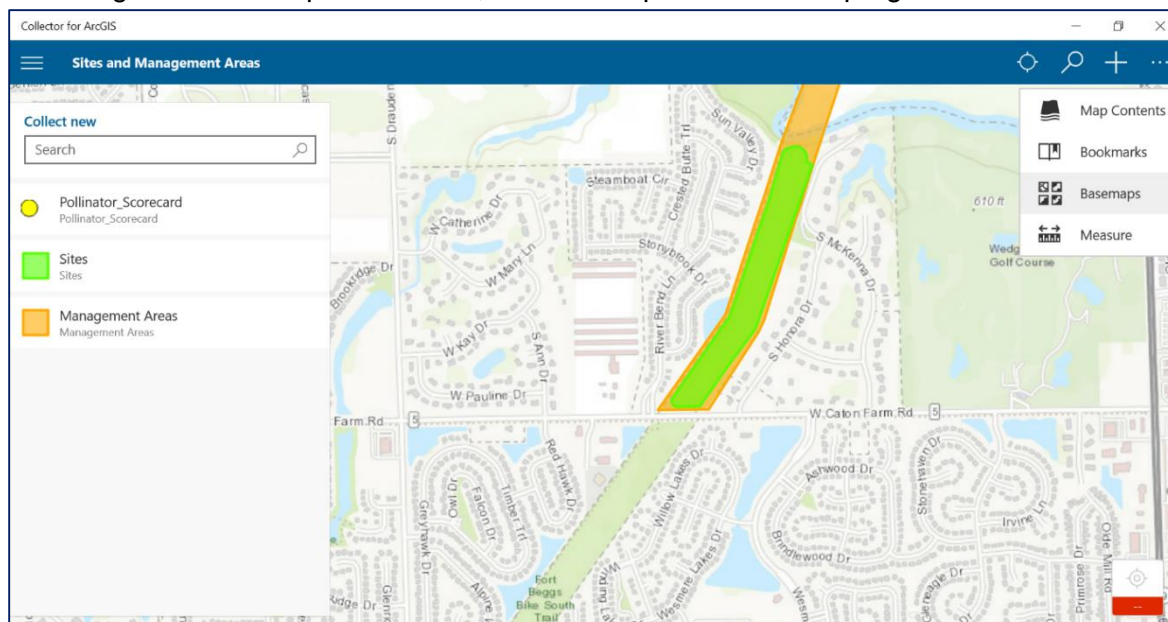




You can either collect data online (click on the map's image) or download the map to work offline (select the down arrow button). To work offline, first select the work area (the maximum extent of the downloaded imagery) and then select the Map Detail button at the bottom and zoom in to the desired level of detail.

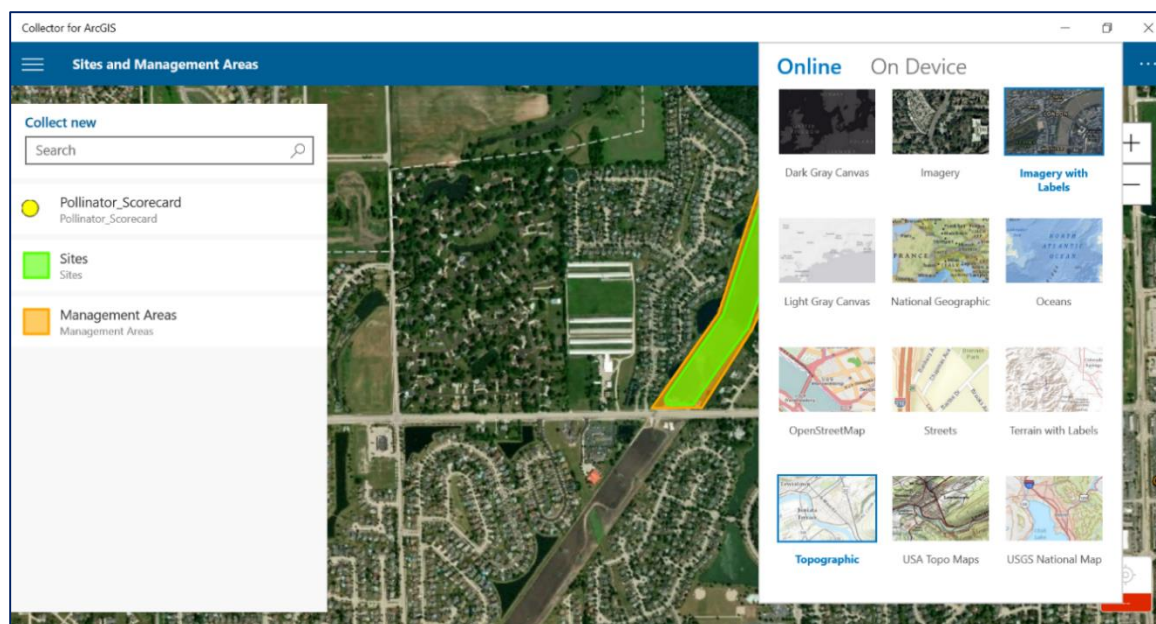
The smaller the work area, the more zoomed in the Map Detail can be. In the top right, choose to download the image. The map can now be used to collect data offline. Once you are online again, sync your data so that the collected data is uploaded to your organization's database.

To change the basemap in Collector, click the ellipsis near the top-right and choose "Basemaps"

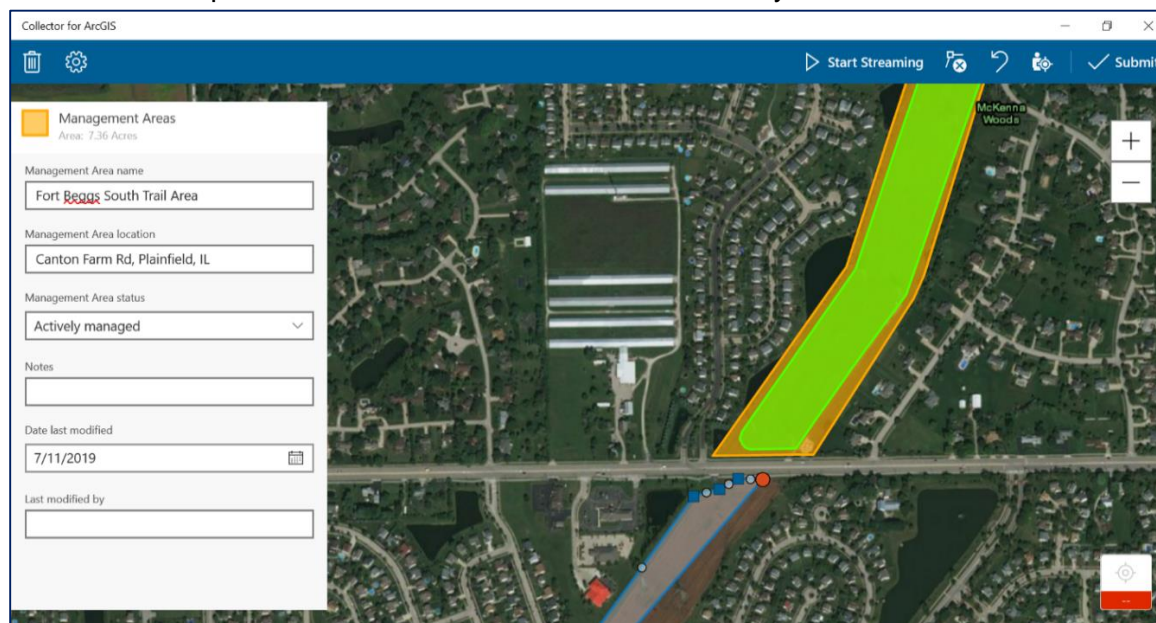


For capturing field data you will likely want to select "Imagery with Labels" (as shown below) so that you will have enough visual information to help you draw boundaries or to accurately find the location where you are capturing data.





To collect a new feature, first select the layer you want to collect (Pollinator Scorecard, Sites, or Management Areas) and click the “+” button. Enter in the attribute information and use the default location, or click on the map to place the feature’s location before clicking on “Submit.” In the image below, the user is creating the boundary for a Management Area. The blue vertices (points) are new points that have been added to define the polygon. The screenshot below shows an example in Collector for ArcGIS. You can similarly collect data in Collector Classic.



## Data Management & Review

The online database system performs a number of automated nightly tasks including calculating spatial attributes (e.g., city, county, adjusted acreage<sup>1</sup>) and reviewing data for errors. The database system checks features against a set of rules, and then records the error/validation information in each feature's attribute table. These features can then be queried and displayed by the error level for data managers to review and edit within a Web Application or ArcGIS Pro.

### Automated database analyses and checks

Any features that have been added or modified in the database system have several fields that are calculated during nightly system checks. These fields are important for summarizing data for use by the public and private dashboards, and avoid the need for users to input fields that are easily automated. The following table shows which fields for each feature class type are calculated during nightly data checks based on their spatial location and geometric properties.

Field	Feature Class				Notes
	Management Area	Site	Center line	Pollinator Scorecard	
County	✓	✓	✓	✓	If the feature spans multiple counties, it is assigned to the county with the largest segment
State	✓	✓	✓	✓	If the feature spans multiple states, it is assigned to the state that contains the county with the largest segment
Acres	✓	✓			Derived by feature geometry as calculated by ArcGIS
Acres Adjusted	✓				Management Area acres are adjusted by removing the acreage of overlapping Sites
Miles			✓		Derived by feature geometry as calculated by ArcGIS
Program GUID				✓	See notes below

<sup>1</sup> "Adjusted acreage" subtracts any overlap between Sites and Management Areas to avoid any double counting of managed lands in area calculations.

## Pollinator Scorecards

It is important to know that the database system automatically assigns a Program (see Program GUID field) for any newly added or modified Pollinator Scorecard records that overlap with a Site or Management Area associated with a Program. This means that if new or modified Scorecard points overlap with a Site or Management Area that is associated with a Program, the system automatically associates the Pollinator Scorecard points with that Program. In cases where the Scorecard point overlaps with both a Site and a Management Area, the Scorecard point will be assigned to the Site's Program.

## Automated data validation

Data validation is the process of inspecting the data submitted by user organizations to ensure it is consistent and in a form that can be applied in different analyses. The validation process can automatically correct some inconsistencies; while for others the system simply raises a flag by attributing the feature with an error description and severity (see below).

## Reviewing and correcting validation errors

Automated nightly data checks log database errors that violate a set of database rules, as shown in the following table. These errors are recorded in three fields that include: the date the error was logged (ValidationDate), the error level from 1-3 or high to low (ValidationLevel), and the error descriptions (ValidationMsg). These errors can be reviewed and corrected (typically by the organization's Data Manager) using a dedicated web application or ArcGIS Pro. Data validation runs on a nightly basis and is limited to new and modified features.

Error Level	Error Severity	Error Description
0	None	Valid
1	High	Not yet validated (initial value)
1	High	Feature spans multiple counties
1	High	Feature not contained in any counties
1	High	Management Area or Site overlaps
1	High	Feature is not assigned to a Program
2	Medium	Site or Management Area is too big to be considered for Pollinator Scorecard analysis
2	Medium	Pollinator Scorecard point is not contained in any Site or Management Area
3	Low	Feature contains a duplicate record ID
3	Low	Feature is sharing a unique Site Program

## Database Reporting and Dashboards

Data contributed to the ROW as Habitat database system is summarized and displayed in both a Public Dashboard (available for all to view) and a Private Dashboard (available for only an organization's internal use). For the Public Dashboard, data is automatically generalized at the county and state level to provide summary reporting statistics without providing specific geographic location and attribute information. The Private Dashboard provides more detailed records, which can be queried and displayed for examining internal metrics. In addition, organizations have the opportunity to contribute their data to the Monarch Conservation Database (MCD), and federal compliance reporting.

### Public dashboard

A single "Public Dashboard" is shared openly through the ROW as Habitat ArcGIS Online public gallery. County and State-wide summarized data layers show the collective impact of Rights-of-Way organizations in counties where data has been captured. The dashboard also helps to drive goalsetting across the Rights of Way as Habitat Working Group.

**Currently, the Public Dashboard is under development. More information will be provided once this resource has been finalized.**

### Private dashboard

Individualized Private Dashboards for each organization provide key information about the data that has been uploaded to the ROW as Habitat database system. Private Dashboards are only accessible to members of the organization's Management Group on the online ROW as Habitat AGOL website.

**Currently, Private Dashboards are under development. More information will be provided once these resources are available.**

### MCD and CCAA reporting

Organizations that choose to contribute data to the Monarch Conservation Database (MCD) developed and hosted by the US Fish and Wildlife Service, have the option of sharing county-scale summarized data pulled directly from the ROW as Habitat database. Similarly, it is anticipated that Data Managers will be able to pull key statistics needed for completing annual reporting requirements as part of the Monarch Butterfly Nationwide Candidate Conservation Agreement on Energy and Transportation Lands.



## Working with ArcGIS Pro

ArcGIS Pro is a Geographic Information Systems (GIS) desktop software developed by Esri. The ROW as Habitat database system relies on this software for performing most GIS data management actions through a shared ArcGIS Pro project file (see [Accessing your ArcGIS Online data](#)). Your organization is NOT required to have your own ArcGIS Pro licensing to contribute data and participate in using this system, since no-cost user accounts and no-cost desktop licensing options are available.

### Getting a License

UIC is able to provide ArcGIS Pro license credentials and permissions for the sole purpose of data capture and contribution to the ROW as Habitat database system. Using these credentials for other purposes is not authorized. By default, Data Manager accounts deployed with new organizations have licensing for ArcGIS Pro included.

Please visit the following website to request ArcGIS Pro licensing if an additional license or account is needed: <https://tinyurl.com/y9ppxbh6>

After agreeing to the required terms and conditions, a license for using ArcGIS Pro will be added to your ROWHWG named user account. The ArcGIS Pro software itself can then be downloaded via the following Esri website as a “21-day” trial:

<https://www.Esri.com/en-us/arcgis/products/arcgis-pro/trial>

Note that in the process of downloading and installing the software, you will be required to create a (temporary) ArcGIS Online (AGOL) account using a valid email address. Once you have downloaded the ArcGIS Pro software, you will then be able to log in using your ROWHWG account (provided). Since your ROWHWG named user account will include ArcGIS Pro licensing, the trial period will not lapse after 21-days so long as you are logged in with your ROWHWG credentials. Once ArcGIS Pro is installed, you can run software updates from the software application, so you always have access to the latest version. The ROW as Habitat database system currently supports ArcGIS Pro version 2.4.1 or newer.

### Accessing Your ArcGIS Online Data

The ROW as Habitat database system uses ArcGIS Online (AGOL) as the user interface for managing user credentials, permission groups, and for distributing map and tools services, while the backend data management system is housed on virtual machines hosted by the University of Illinois at Chicago. In order to access your organization’s data stored in the online system via ArcGIS Pro, your AGOL account needs to 1) have access to the Management Group for your organization, and 2) be authorized to use ArcGIS Pro. The new Data Manager account created when your system was first deployed has access to the Management Group, and the Account Administrator account has authorization to “invite” additional users (see [Inviting additional users and accepting Invitations](#)). By default, your Data Manager account may already

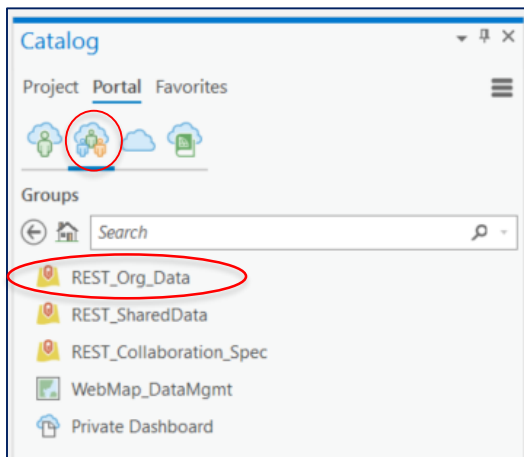
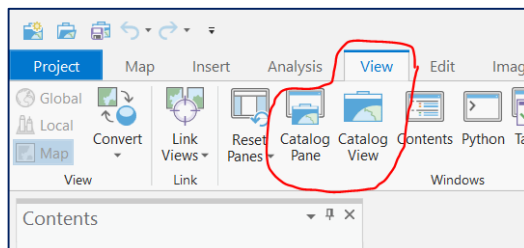
be authorized to use ArcGIS Pro. If not, you can complete an online form to request access<sup>2</sup>. Users with an existing organizational account and ArcGIS Pro authorization, can also access data via ArcGIS Pro provided that they have been invited into the Management Group and they have accepted the invitation. Using one of these accounts, follow the guidelines outlined below to access your organization's data records and database tools.

## Access data records

This section describes how to access your organization's GIS records in the ROW database system using ArcGIS Pro. You can use these steps to work directly with your organization's data to perform edits and run tools for importing and managing your data. Warning, any edits you make while directly accessing your organization's data are saved directly to the database. It is strongly encouraged that you save a local copy of your organization's data as needed (see [Download a database backup](#)), to ensure that you do not lose any data.

### Steps to Access and Edit ROW Database Records using the Catalog Pane

1. Open ArcGIS Pro and make sure that you are logged in with your ROWHWG ArcGIS Online account that has access to an ArcGIS Pro license and your organization's Management Group.
2. Make sure the **Catalog Pane** is visible. If it's not, select it from the **View** tab.
3. In Catalog, click on **Portal** and select **Groups** to view the permission groups you can access.
4. Double-click on your organization's Management Group to reveal the objects and tools in the group.
5. Within your Group are the REST endpoints, which are direct links to the data on the server. These include REST\_Org\_Data (your organization's data), REST\_SharedData (data shared by other organizations), and REST\_Collaboration\_Spec (your organization's sharing specifications).
6. Right-click on the REST endpoint you want to access and select **Add to New Map**.

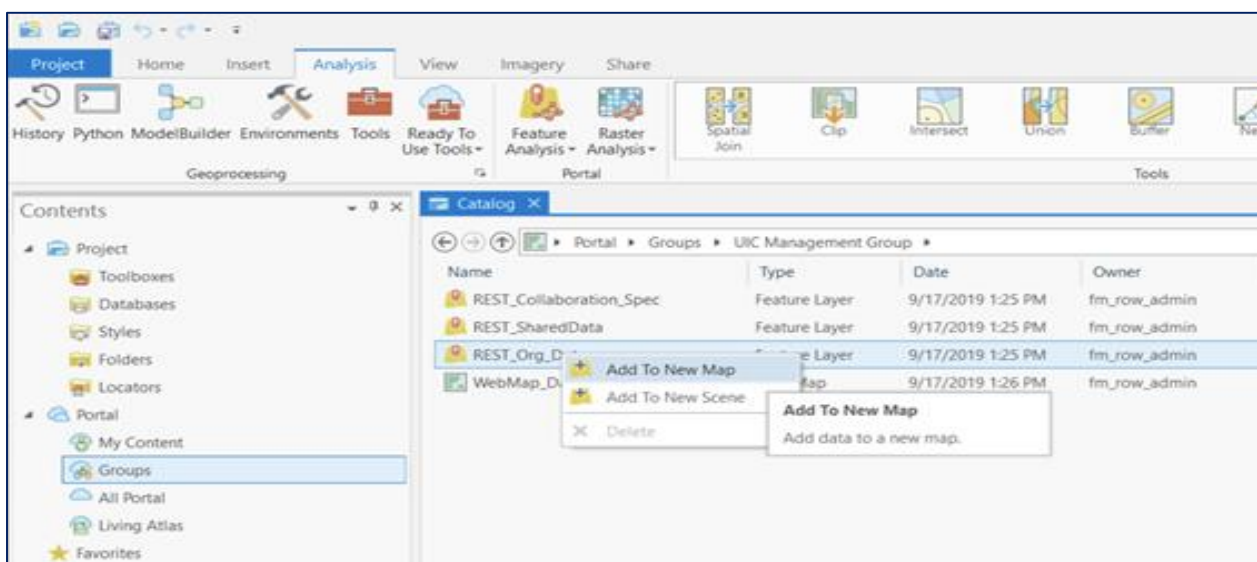


### Steps to Access and Edit ROW Database Records using the Catalog View

1. Make sure the **Catalog View** is visible and active in the center window.
2. In the **Contents** pane, expand **Portal** and click on **Groups**.

<sup>2</sup> Link to request an ArcGIS Pro license <https://tinyurl.com/y9ppxbh6>

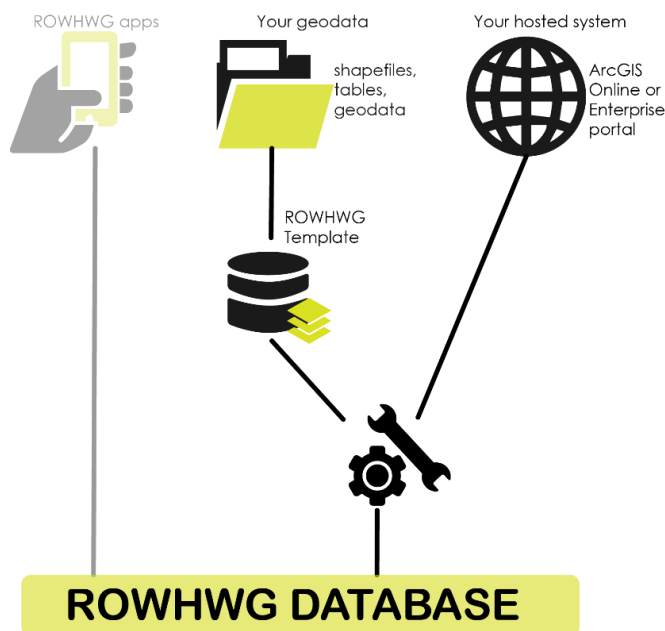
3. Right-click on the “REST\_Org\_Data” feature layer and select **Add to New Map**.



## Importing and Exporting Your Data with ArcGIS Online

### Overview of Import options

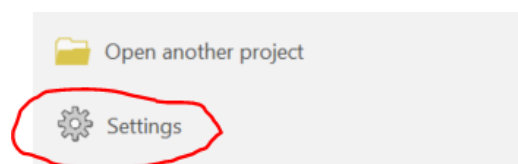
If your organization uses the ROWHWG Survey123 pollinator scorecard and Esri Collector for ArcGIS applications, then your data should be going directly into the ROWHWG database (although you may need to “sync” changes on your mobile devices if used offline). For organizations that have geospatial data from other sources such as shapefiles or a file geodatabase, you will need to import these data into the ROWHWG template file geodatabase so that the schema matches the ROWHWG database system.



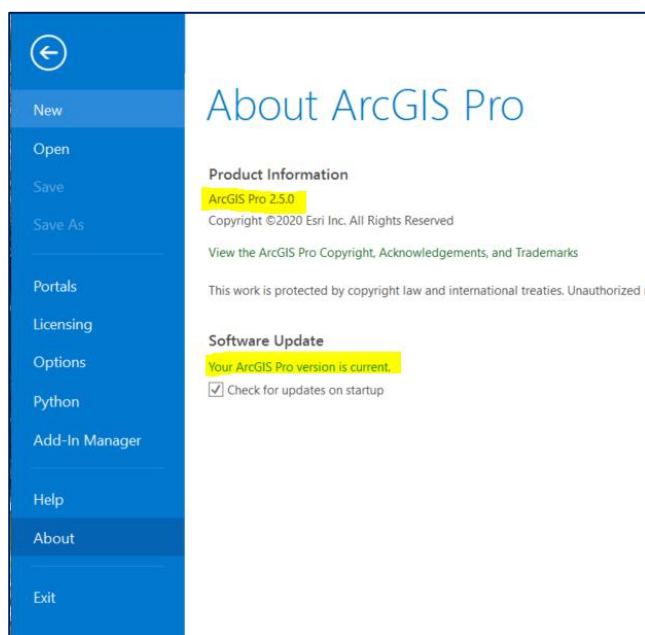
## Load the ROW tools project

A set of tools is provided to assist data managers in preparing and importing their organization's data into the ROW as Habitat database system. Prior to importing, the data manager must first prepare their data to conform to the ROW as Habitat database schema. This process may include matching attribute fields so that attribute information from the original data source can be aligned with attribute fields in the ROW as Habitat database schema.

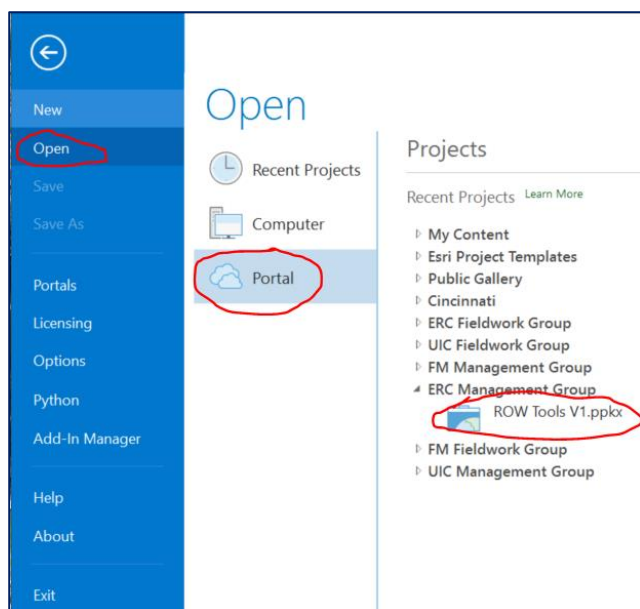
In order to access the tools for preparing and importing your data into the ROWHWG ArcGIS Online database, you will need to open the ROW Tools project in ArcGIS Pro. Begin by opening ArcGIS Pro, and select Settings (bottom-left of screen).



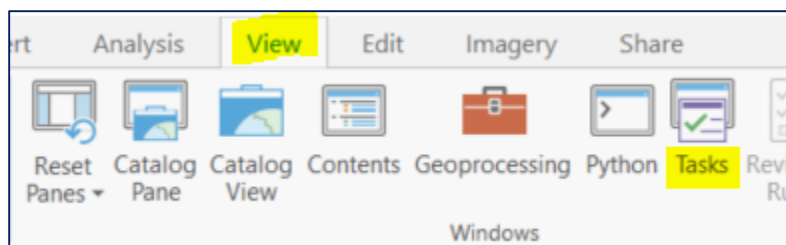
In the “About ArcGIS Pro” window, make sure that you are using version 2.4.1 or newer, since there are known bugs in earlier versions that affect some of the tools. On this page, click the “Download Now” button to download a software update (if needed).



Next, on the left-hand side, go to Open, click on Portal, and select the arrow next to your organization's Management Group name. **Select ROW V# Tools.ppkx** to open the ROW Tools project document.



When the project opens for the first time, you will see an empty map. To display the Tasks and Workflows pane, if not already open, click on **View** and select **Tasks** (as shown below).



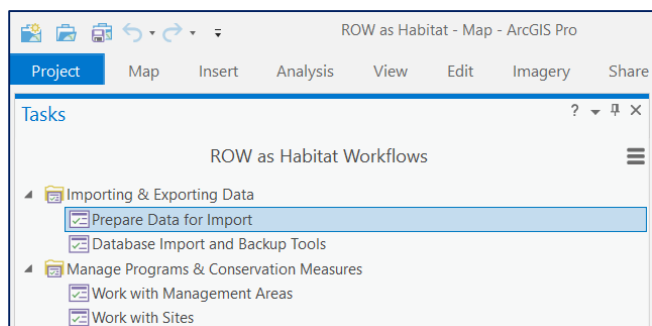
## Prepare data for import

This workflow loads your data into a downloaded “staging” geodatabase that has the most recent ROWHWG schema template. Please note:

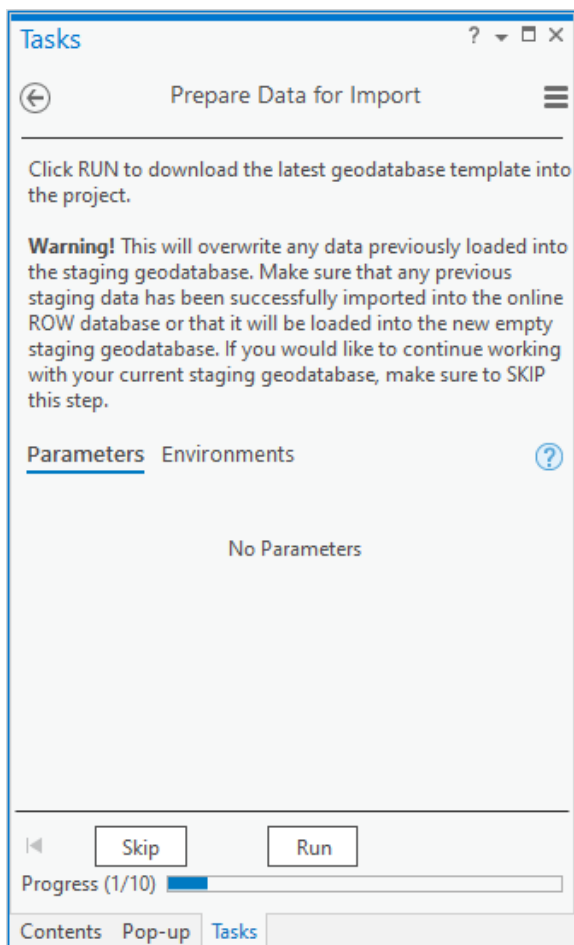
- If your data is already loaded into the template file geodatabase, and includes all of the provided feature classes even if empty, you can skip this section and go to the [Download a database backup](#) section.
- In determining how best to match up your data fields to the ROW as Habitat database schema, please refer to our Schema Guidance documents<sup>3</sup>, which includes detailed information about all fields in the database.
- Shapefile field names are limited to 10 characters, so you may want to avoid using this data format for capturing data in the future as it may truncate your fieldnames if originally converted from a geodatabase.

<sup>3</sup> <http://rightofway.erc.uic.edu/wp-content/uploads/schema.zip>

With the above ArcGIS Pro project loaded, and the ROW as Habitat Workflows visible in the Tasks pane, expand the workflow folder titled **Importing & Exporting Data** and then double click on **Prepare Data for Import** to show all of the steps, which are described below.

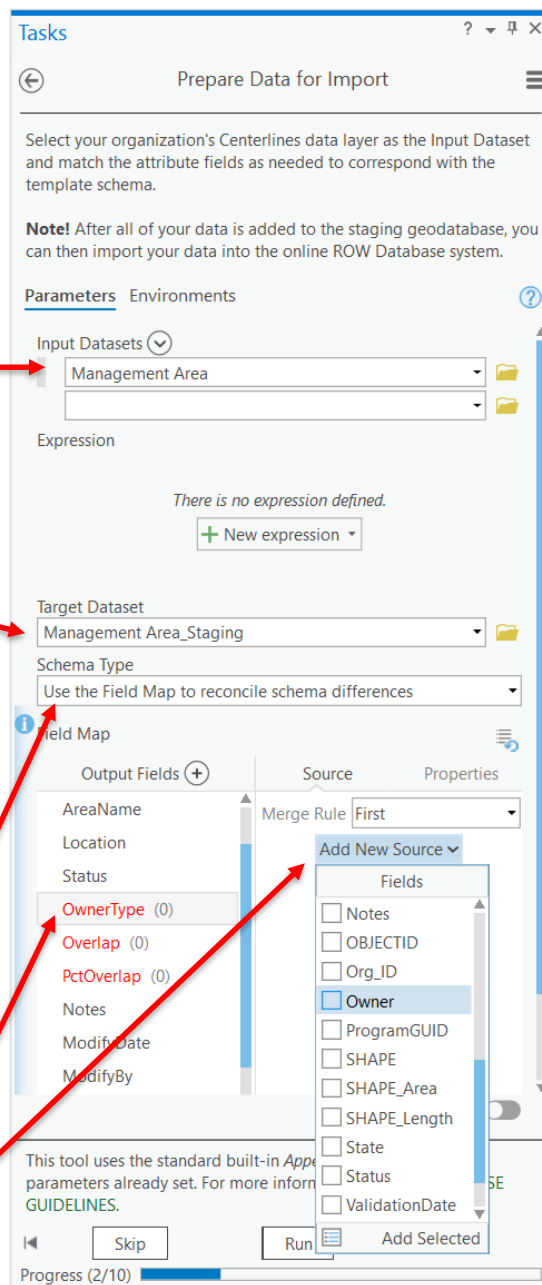


**Step 1: Download latest template.** This step downloads a copy of the latest database schema that you will use for preparing your data for import. If you have already started the process of pre-loading your data into the staging geodatabase, you may want to skip this step as it will overwrite the staging geodatabase with a fresh copy of the geodatabase template.



**Step 2-9: Adding Features and Tables to the Staging Database.** This figure shows the tool fields for adding feature classes and tables to the “staging” geodatabase. Select an **Input Dataset** with the fields you want to match to the ROW template<sup>4</sup>. The target dataset in each step defaults to the step’s respective staging database layer or table.

- In the panel, select the **Input dataset** that contains your data (e.g., a shapefile, a feature class, or table). This example uses a feature class called “Management Area” from a file geodatabase.
- Next, the **Target Dataset** should be set to the staging template layer you are importing, in this case “Management Area\_Staging.”
- Ideally the data fields in your data source are the same fields provided in the file geodatabase schema and thus should automatically match. However, if the data fields in your data source do not exactly match the ROWHWG template, then you will need to set the **Schema Type** to “use the Field Map to reconcile schema differences.”
- Select an unmatched field on the left (e.g., OwnerType highlighted in red). On the right-hand side, click the **Source** tab and **Add New Source** and scroll down the list to select the appropriate matching field from your data source (e.g. Owner). Alternatively, if you do not have a matching field, you can remove the field in red by clicking on the red “X” that appears when hovering over the field. For your convenience, internal database fields like “ValidationLevel” have already been removed in default settings.

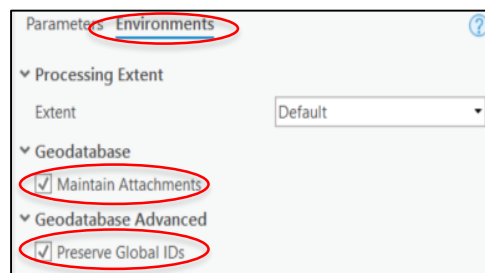


<sup>4</sup> For detailed information on all fields in the ROW template, refer to our Schema Guidance document on the ROW website. <http://rightofway.erc.uic.edu/wp-content/uploads/schema.zip>

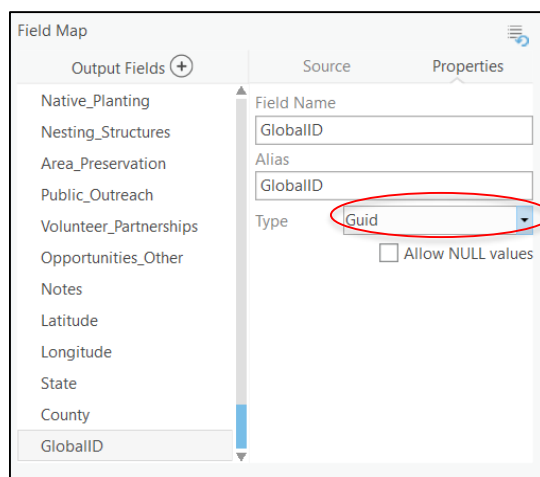


### Important Notes:

- For data that uses a Global ID field for related tables and attachments (e.g., Sites Conservation Measures, Plot Photos table), you may need to make sure that the options to Maintain Attachments and Preserve Global IDs are selected. At the top of the Tool window, Select the **Environments** tab and make sure that the Maintain Attachments and the Preserve Global IDs fields are checked.



- For all data with a Global ID field, you may need to make sure that the property type has been changed from “GlobalID” to “Guid”. Under the **Output Fields** column, select the GlobalID field. On the right-hand side, select the **Properties** tab. Change the Type field from GlobalID to Guid.



- When importing Management Areas and Sites, consider matching additional data to the “Notes” field such as land management, or best management practices that might be useful for grouping features into Programs later (see [Working with Management Areas](#)).
- If you encounter a failure, review the resulting error message. Usually errors are due to incompatible field types. Remove or modify the data source and try **Run** again.
- Shapefile field names are limited to 10 characters, so you may want to avoid using this data format for capturing data in the future as it may truncate your fieldnames if originally converted from a geodatabase.

**Step 10: Save to new location for import.** This step provides an opportunity to save a local copy of the staging geodatabase to a known location. Be sure to save the file into a location where you can easily find it for the import process in the next section. Be sure to include the (.GDB) file extension in the file name.



## Download a database backup

If your organization has any existing data in the ROW database system, it is strongly recommended that you make a backup of your data by running the backup tools as outlined in this section.

With the ArcGIS Pro project loaded, and the ROW as Habitat Workflows visible in the Tasks pane, expand the workflow folder titled Importing & Exporting Data and then double click on **Database Import and Backup Tools** to show all of the steps (to load tasks, see [Importing and exporting your data with ArcGIS Online](#)).

**Step 1: Add online ROW data to map.** This optional step provides instructions on adding your online data to the map to see what data you will be exporting out to a local backup copy.

**Step 2: Backup your online data.** The figure below shows the tool fields for saving a local backup copy of your online data.

- Select your **Organization ID** from the dropdown list. There should only be one option unless you are part of more than one subsidiary or you are a contractor working for more than one organization.
- Provide a name for your **Output Dataset** that will serve as your backup. Be sure to include the (.GDB) file extension in the file name.

## Review and import your data

This section continues from the one above, beginning with step 3 from Database Import and Backup Tools in the ROW as Habitat Workflows.

**Step 3: Preview your planned import.** This step creates a local copy of all of the data that will be included in the ROW as Habitat database system after the import is complete. The purpose of this optional step is for you to review how your data will import and merge with existing data before running the actual import. If you have never added data to the online database, you may want to skip this step. Note that the Preview step and Import step (Step 4) are identical except that Preview saves the output locally, while the Import tool adds data to the online database.

The figure below shows the tool fields for creating and saving a local copy of the import results.

- Select your **Organization ID** from the dropdown list. There should only be one option unless you are part of more than one subsidiary or you are a contractor working for more than one organization.
- For the **Input Dataset**, locate the database you plan to import (e.g. the “staging database” you saved if you followed [Prepare data for import](#) above).

The screenshot shows a 'Parameters' tab with the following settings:

- Organization ID:** ERC
- Input Dataset:** ROWHWG\_ERC\_import.gdb
- Output Dataset:** ROWHWG\_ERC\_Preview.gdb
- Import Option:** Append
- Matching Record Option:** Update

- Provide a name and location for your local **Output Dataset** that will serve as a preview geodatabase for review.
- Included are two **Import Options**. If you have existing data in the ROW database, you can use the **Append** option to add new records to the existing data, or you can use the **Purge and Replace** option to first delete all of your existing records from the database and replace it with all of the records in your Input Dataset.
- Using the **Matching Record Option**, you can either **Update** any existing records in the database with new matching records (including geometry changes), or you can **Skip** matching records, and the existing records will be kept unchanged. For this setting to have any effect, the Feature Class/Table you are importing must have populated ID Field records (see table). In addition, you must have Append selected as the import option in the settings above.
- **Note** for first time imports: If your organization will be editing imported data in the ROW database system, you may want to include unique ID's for your features and tabular records so that future imports can utilize the **Append** feature with the **Matching Record Option**.

Feature Class/Table	ID Field
Site	Site_ID
Managment_Areas	Area_ID
Centerlines	LineName
Pollinator Scorecard	Scorecard_ID
Management Area Conservation Measure	MgmtCM_ID
Site Conservation Measures	SiteCM_ID
Plot Photos	PlotPhoto_ID

**Step 4: Import data into the database.** This step will import your data into the database and may change or delete records depending on the settings you select. As noted in the section above, if your organization has any existing data in the ROW database system, it is strongly recommended that you make a backup of your data, as outlined above, before importing new data. In addition, it is also recommended that you **Preview** your data import before adding your data to the online database in the previous step. Please note:

- This step uses the same interface as the Preview tool, except since data goes directly into the online database, there is no Output Dataset setting. See the previous step for information about each setting.

- Use **Import Option** “Purge and Replace” with extreme **CAUTION**, especially if you have not first exported a copy of your database (see Step 1 above). This option not only removes all features, but all Programs and Conservation Measure tables. If you do not have any existing data in the ROW database this setting is arbitrary.
- HTML programming tags and the arroba “@” symbol entered into any text field will result in an import failure when writing to a REST endpoint due to Esri security settings.
- After inputting your data, it is recommended that you review your data in the system to make sure all of your data imported correctly.

## Managing Conservation Measures and Programs

It is important that users have a clear understanding of Sites, Management Areas, and Programs before moving ahead with adding Programs and Conservation measures (see [Sites & Management Areas](#)).

### How conservation measures and programs work

Management activities that may result in helping to promote or protect habitat areas can be added and tracked in the ROW as Habitat online database system. There are two ways that these data records can be recorded. First, Conservation Measures can be directly associated with a single land area (Site). Alternatively, a set of Conservation Measures can be assigned to a Program, which is then applied to several land areas (Management Areas). One key benefit of recording Conservation Measures for Sites is that individual measures are assigned to a single land area so that site-specific information can be recorded (e.g., date when a Site was seeded). The benefit of recording Conservation Measures through Programs is that these records can be associated with many land areas simultaneously over a general period of time (e.g. conservation mowing occurred over the 2020 post-growing season). For detailed information and example scenarios, see the Sites vs. Management Areas PDF document<sup>5</sup>.

### Working with Management areas

This workflow walks you through creating a Program for Management Areas, adding your online ROW data to a map (if not previously done), adding Conservation Measures to a Program, and applying a Program to selected Management Areas.

With the ArcGIS Pro project loaded and the ROW as Habitat Workflows visible in the Tasks pane, expand the workflow folder titled **Manage Programs & Conservation Measures**, and then double click on **Work with Management Areas** to show all of the steps. For help on loading these tasks and workflows, see [Importing and exporting your data with ArcGIS Online](#).

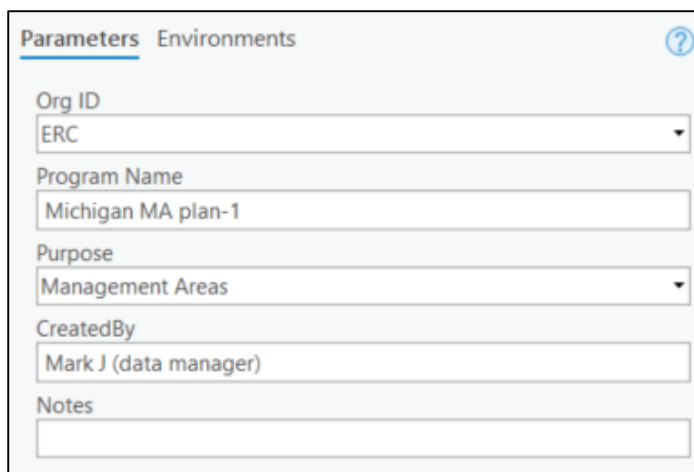
**Step 1: Create a Program.** If you have created or imported Management Areas into the ROW as Habitat database system, but have not yet created one or more Programs, run this step (repeatedly if needed) to create new Programs for Management Areas. In establishing these

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<sup>5</sup> <http://rightofway.erc.uic.edu/wp-content/uploads/Sites-vs.-Management-Areas.pdf>

Programs, think carefully about how Management Areas will be assigned to a Program (Step 3). Since Programs are what tie Conservation Measures to Management Areas, these Programs should not change from year to year. Instead, Conservation Measures should be attributed with Activity Start and Activity End dates to designate past or current activities. Note that this step can be skipped if you have already established Programs and just want to add Conservation Measures and/or want to assign Management Areas to an established Program in subsequent steps. The figure below shows the tool fields for creating a new Management Area Program.

- **Org ID:** Select your organization ID from the list of options (based on your login credentials).
- **Program Name:** Add a unique and concise name that describes the Project. This name will be used in the next step for assigning Conservation Measures, and then for adding Management Areas to the Program.
- **Purpose:** Select “Management Areas.” Other options exist because this tool is also used in other tasks for assigning Programs to unique and grouped Sites.
- **Created By:** Add your name to indicate that you created the Program record.
- **Notes:** Add any additional notes that may be helpful or leave blank.



**Step 2: Add online ROW data to Map.** This step adds your organization’s data that is currently hosted on the ROW as Habitat online database system to the map. It serves two purposes. First, after adding your online data to the map, you can open the Management Areas - Conservation Measures (table) to see any existing measures and new measures added in the next step. Second, this step loads the Management Areas feature class, which you will need in the 4<sup>th</sup> step for selecting the Management Area polygons that will be added to each Program.

- In the Catalog Pane (under View), select “Portal” and the “Groups” icon to locate your organization’s Management Group. Next, double click the Group name, right click on the “REST\_Org\_Data,” and select “Add To Current Map.” Be patient, the server may need to establish a connection if it has not been in use for some time.
- By switching to the Contents tab (or click on View and Contents), you should now see feature layers for your organization under REST\_Org\_Data. Expand this group to show all of your layers.
- Open the Management Areas - Conservation Measures (table) under Standalone Tables by right-clicking on the table and selecting “Open.”
- Open the Management Areas attribute table by right-click on the layer and selecting “Attribute Table.”
- Return to the Tasks pane tab (or View and Tasks) in preparation for the next step.

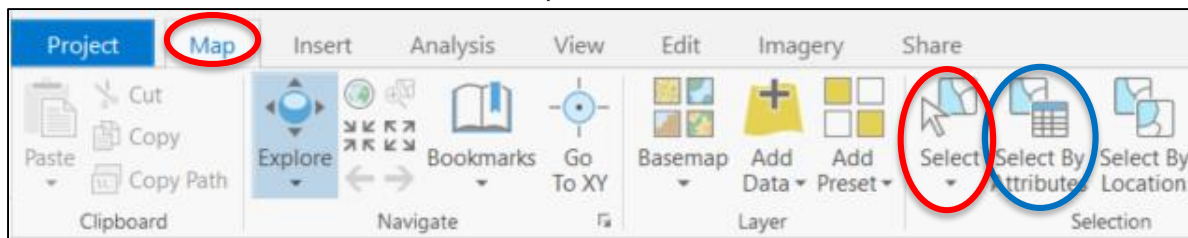
**Step 3: Add a Conservation Measure.** This step, which can be repeated as needed, adds Conservation Measures to previously created Management Area Programs. It is recommended that you have the Conservation Measures table open so that you can review existing records and edit records if needed. It may also help to avoid duplication. To sort the table, select the field header and right-click to see sorting options by one or more fields. The figure below shows the tool fields for adding a Conservation Measure to a selected Program.

- **Org ID:** Select your organization ID from the list of options (based on your login credentials).
- **Program Name:** Be sure to select the correct Program you want to work with in assigning Conservation Measures.
- **Conservation measure:** Select from the available options. Keep in mind that the same measure can be applied twice with different start/end times if needed.
- **Implementation organization:** Add the name of the organization that performs the work (if known).
- **Implementation frequency:** Select the most appropriate frequency for this conservation action. Are you recording a one-time occurrence, an annual event, or some other frequency?
- **Date activity began:** The approximate start date or season when this conservation measure began (required).
- **Date completed or last activity:** The approximate end date or end of season when this conservation measure ended. For ongoing measures, this field can be kept empty, implying that this activity is still active. (optional)
- **Notes:** Add any additional notes that may be helpful or leave blank.
- **Measure ID:** This optional field allows the organization to uniquely identify each measure so that during future data uploads, measures with the same identifier will either be skipped or replace the existing measure.

The screenshot shows a web form titled 'Parameters' with a 'Parameters' tab selected. The form contains the following fields:

- Org ID:** A dropdown menu with 'ERC' selected.
- Program Name:** A dropdown menu with '[9212] Management Areas: 'Michigan MA plan-1'' selected.
- Conservation measure:** A dropdown menu with 'Brush removal to promote suitable habitat' selected.
- Implementation organization:** A text input field containing 'Environmental services'.
- Implementation status:** A dropdown menu with 'Implemented' selected.
- Implementation frequency:** A dropdown menu with 'Annually' selected.
- Date activity began:** A date and time picker showing '5/1/2020 4:34:41 PM'.
- Date completed or last activity:** A date and time picker that is currently empty.
- Notes:** A text input field that is currently empty.
- Measure ID:** A text input field containing 'ERC\_MA\_plan\_9212'.

**Step 4: Apply Program to Selected Features.** This step allows you to assign selected Management Areas to a designated Program. Make sure that the Management Areas you are displaying are from the REST\_Org\_Data layer in the online database (Step 2). The figure below demonstrates how to select features in the map for use in the tool.



- Within the map interface, use the “Map” tab and the “Select” tool (circled in red) to select features you want to add to a Program. Click-hold and drag the mouse to select all features in a box and/or hold down the Shift key to select additional features.
- Instead of manually selecting features using the above method, you can use the “Select by Attributes” tool (circled in blue) to select a subset of Management Areas based on attributes such as the Notes or Ownership fields. Select the Management Areas layer for the Input Rows and then click on “New expression” to add one or more where clauses for selecting the features of interest. For example, when importing your data you may want to include BMPs, or management data in the Notes field to help select features that you will associate with a Program. Click on Run to select the matching features.

The figure below shows the tool fields for assigning the selected Management Areas to a designated Program.

- **Feature Layer:** Select the feature layer with the selected features (REST\_Org\_Data\Management Areas).
- **OK to Select All Features:** This checkbox option will select all of the Management Area features (rather than selecting a subset as shown above) to apply to a single Program. Do not check this box unless you want to apply a single Program to all Management Areas.
- **Program to Apply:** Choose the Program that will be assigned to the selected Management Area features. Program options will change depending on the Feature Layer selected above. Keep in mind that features can only belong to a single Program.
- **If feature has existing Program:** For features that have already been assigned to a Program, this setting will determine if the Program will be overwritten with the one you’ve selected, or if the existing program will be kept. This is evaluated for each feature.

A screenshot of a 'Parameters' dialog box. It has two tabs: 'Parameters' (selected) and 'Environments'. Under 'Parameters', there are four fields: 1. 'Feature Layer' with a dropdown menu showing 'Management Areas' and a folder icon to its right. 2. 'OK to Select All Features' with an unchecked checkbox. 3. 'Program to Apply' with a dropdown menu showing '[9212] Management Areas: 'Michigan MA plan-1''. 4. 'If feature has existing program' with a dropdown menu showing 'Keep the existing program'. A question mark icon is in the top right corner.



## Working with Sites

This workflow walks you through adding your online ROW data to a map (if not previously done), creating and assigning Conservation Measures to multiple Sites (in bulk), creating/assigning Programs for individual (unique) Sites, creating Programs for grouped Sites, and assigning multiple Sites to a grouped Sites Program. Please note:

- Conservation Measures can either be created/assigned to multiple Sites at once using the bulk tool or can be added to each Site manually.
- Unlike Management Areas, Programs created for Sites are used solely for assigning Pollinator Scorecard points to their associated Sites. Each Pollinator Scorecard point is automatically assigned to the Program shared by the Site it overlaps via nightly validation checks. Thus, a Pollinator Scorecard point can be associated with either a single Site (i.e., overlapping Site has a unique Program) or with multiple Sites (i.e., overlapping Site shares a grouped Program with other Sites that may share similar management practices).

With the ArcGIS Pro project loaded and the ROW as Habitat Workflows visible in the Tasks pane, expand the workflow folder titled **Manage Programs & Conservation Measures**, and then double click on **Work with Sites** to show all of the steps. For help on loading these tasks and workflows, see [Importing and exporting your data with ArcGIS Online](#).

**Step 1: Add online ROW data to Map.** This step adds your organization's data that is currently hosted on the ROW as Habitat online database system to the map. It serves two purposes. First, after adding your online data to the map, you can open the Sites - Conservation Measures (table) to see any existing measures and new measures added in the next step. Second, this step loads the Sites feature class, which you will need in the following steps.

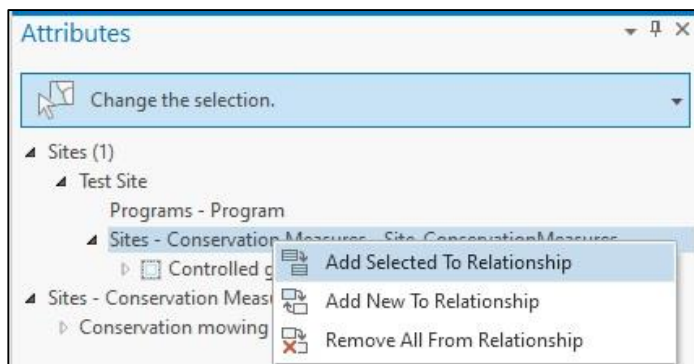
- In the Catalog Pane (under View), select "Portal" and the "Groups" icon to locate your organization's Management Group. Next, double click the Group name, right click on the "REST\_Org\_Data," and select "Add To Current Map." Be patient, the server may need to establish a connection if it has not been in use for some time.
- By switching to the Contents tab (or click on View and Contents), you should now see feature layers for your organization under REST\_Org\_Data. Expand this group to show all of your layers.
- Open the Sites - Conservation Measures (table) under Standalone Tables by right-clicking on the table and selecting "Open."
- Open the Sites attribute table by right-click on the layer and selecting "Attribute Table."
- Return to the Tasks pane tab (or View and Tasks) in preparation for the next step.

**Step 2: Assign Conservation Measures to Sites (in bulk).** Since Conservation Measures are associated with individual Sites, adding them to each individual Site can be tedious for organizations that have lots of Sites. To make this an easier process, Conservation Measures can be added to several Sites simultaneously using this tool. For example, an organization may want to apply conservation mowing to a rotating set of Sites each year. This step can be

repeated to add different Conservation Measures, and different Sites can be selected between each run.

If you would like to manually create Conservation Measures and apply them to a single Site at a time, use the following steps:

1. Open the Sites - Conservation Measures (table).
2. At the table bottom, "Click to add new row" and enter the details of the new Conservation Measure(s)
3. Select the desired Measure(s) and the corresponding Site they will be applied to.
4. In the Attributes pane, click to expand the arrow next to "Sites" and the arrow next to the Site name.
5. Right click on "Sites – Conservation Measures – Site\_Conservation Measures" and select "Add Selected To Relationship."



This figure shows the tool fields for assigning Conservation Measures to selected Sites. Within the map interface, use the "Map" tab and the "Select" tool or the "Select by Attributes" tool to select the features you want to use with the tool. See Step 4 of [Working with Management Areas](#) for more information about selecting features.

- **Sites Layer:** Select the Sites layer with the selected features (REST\_Org\_Data\Sites).
- **OK to Select All Features:** This checkbox option will select all of the Sites features (rather than selecting a subset as shown above) to apply to a single Program. Do not check this box unless you want to apply a single Program to all of the Sites.
- **Conservation measure:** Select from the available options. Keep in mind that the same measure can be applied twice with different start/end times if needed.
- **Implementation organization:** Add the name of the



organization that performs the work (if known).

- **Implementation frequency:** Select the most appropriate frequency for this conservation action. Are you recording a one-time occurrence, an annual event, or some other frequency?
- **Date activity began:** The approximate start date or season when this conservation measure began (required).
- **Date completed or last activity:** The approximate end date or end of season when this conservation measure ended. For ongoing measures, this field can be kept empty, implying that this activity is still active. (optional)
- **Notes:** Add any additional notes that may be helpful or leave blank.
- **Measure ID:** This optional field allows the organization to uniquely identify each measure so that during future data uploads, measures with the same identifier will either be skipped or replace the existing measure.

**Step 3: Create Programs for Unique Sites.** All sites must be assigned to a Program in order to associate them with Pollinator Scorecard assessments. For a Site to be considered unique, it must have a Program associated with a single Site polygon. This tool automates the process of creating unique Site Programs. Users select all of the Sites that need to be associated with a unique Program, which is then generated by this tool. Note: Review the attribute table for all selected features to make sure that each feature has a unique entry for the Site ID field, which will be used for the unique Program Name. If the Site ID field is empty, no Program will be created for the Site

The figure below shows the tool fields for creating a unique Program for each selected Site. Within the map interface, use the “Map” tab and the “Select” tool or the “Select by Attributes” tool to select the features you want to use with the tool. See Step 4 of [Working with Management Areas](#) for more information about selecting features.

- **Sites Feature Layer:** Select the Sites layer with the selected features (REST\_Org\_Data\Sites).
- **OK to Select All Features:** This checkbox option will select all of the Sites features (rather than selecting a subset as shown above) to apply to a single Program. Do not check this box unless you want to apply a single Program to all of the Sites.
- **Created By:** Add your name to indicate that you created the Program record.
- **Notes:** Add any additional notes that may be helpful or leave blank.



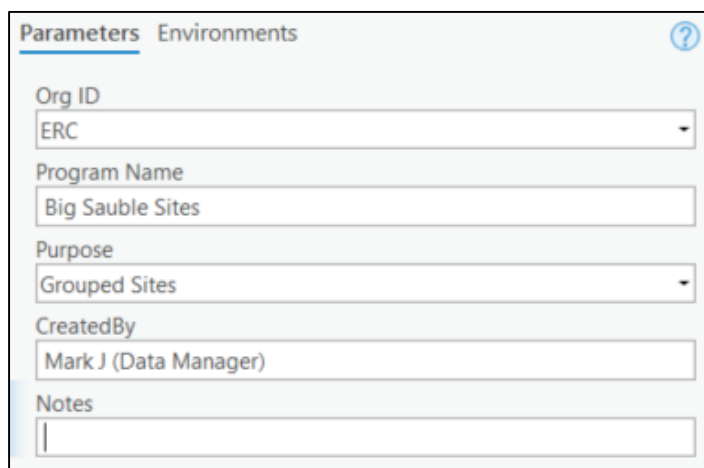
The screenshot shows a 'Parameters' panel with the following fields:

- Site Feature Layer:** A dropdown menu currently showing 'Sites'.
- OK to Select All Features:** An unchecked checkbox.
- CreatedBy:** A text input field containing 'Mark J (Data Manager)'.
- Notes:** An empty text area.
- If program already exists:** A dropdown menu currently showing 'Overwrite the existing program'.

- **If Program already exists:** For features that have already been assigned to a Program, this setting will determine if the Program will be overwritten with the one you've selected, or if the existing program will be kept. This is evaluated for each feature.

**Step 4: Create Program for Grouped Sites.** The purpose of grouping Sites under a shared Program is so that Pollinator Scorecard habitat monitoring results can be applied to land areas in similar condition and under similar land management practices. This step creates a new Program that can then be assigned to a group of Sites and Pollinator Scorecard (habitat assessment) points. This step can be skipped if there is an existing Program you want to work with in the next steps.

- **Org ID:** Select your organization ID from the list of options (based on your login credentials).
- **Program Name:** Add a concise but clear name that describes the Project. This name will be used in the next step for assigning Conservation Measures, and then for adding Sites to these Programs.
- **Purpose:** Select "Grouped Sites." Other options exist because this tool is also used in other tasks for assigning Programs to Management Areas and unique Sites.
- **Created By:** Add your name to indicate that you created the Program record.
- **Notes:** Add any additional notes that may be helpful or leave blank.



**Step 5: Join a Group of Sites to a Program.** As mentioned in the previous step, grouped Sites are used for grouping Pollinator Scorecard habitat monitoring results under a Program which can be applied to land areas in similar condition and under similar land management.

The figure below shows the tool fields for assigning multiple Sites to a Program. Within the map interface, use the "Map" tab and the "Select" tool or the "Select by Attributes" tool to select the features you want to use with the tool. See Step 4 of [Working with Management Areas](#) for more information about selecting features.

- **Feature Layer:** Select the feature layer with the selected features (REST\_Org\_Data\Sites).
- **OK to Select All Features:** This checkbox option will select all of the Sites features (rather than selecting a subset as shown above) to apply to a single Program. Do not check this box unless you want to apply a single Program to all of the Sites.
- **Program to Apply:** Choose the Program that will be assigned to the selected Site features. Program options will change depending on the Feature Layer selected above. Keep in mind that features can only belong to a single Program.
- **If feature has existing Program:** For features that have already been assigned to a Program, this setting will determine if the Program will be overwritten with the one you've selected, or if the existing program will be kept. This is evaluated for each feature.



The screenshot shows a 'Parameters' dialog box with the following settings:

- Feature Layer:** Sites
- OK to Select All Features:** ☐
- Program to Apply:** [13612] Grouped Sites: 'Big Sauble Sites'
- If feature has existing program:** Keep the existing program