

Adopt-A-Catch Basin Documentation (Version 1.0)

Introduction to Adopt-A-Catch Basin

Adopt-A-Catch Basin can be used to operate catch basin adoption programs that allow volunteers to adopt storm drains and clean them for the community.

Adopt-A-Catch Basin programs seek to improve water quality, decrease localized flooding, and reduce maintenance costs by leveraging individual volunteers and organizations to clean drains and keep water flowing. Program volunteers are typically asked to inspect their drains; remove leaves, trash, and other debris; and report damage or clogs at regular intervals. In some cases, they may even be asked to check on an adopted drain before a forecasted storm. This simple action has a big impact on the cleanliness of local waterways and reduces the chance of localized flooding during a storm. Adopt-A-Catch Basin is typically implemented by public works agencies or utilities that want to engage the community and maximize the capacity of operations staff.

The Adopt-A-Catch Basin solution delivers a set of capabilities that help you engage volunteers to keep catch basins clear of debris and functioning properly, manage participants, and monitor the adoption program.

Requirements

Adopt-A-Catch Basin requires the following:

- ArcGIS Online
- ArcGIS Enterprise 10.7.1 or later
- ArcGIS Pro 2.5 or later (Basic, Standard, or Advanced)
- ArcGIS Web AppBuilder (Developer Edition) 2.11 or later
- SMTP Server

Information products

Adopt-A-Catch Basin includes the following information products:

Item	Description	Minimum user type
Adopt-A-Catch Basin	An ArcGIS Hub site used by the general public to learn how they get involved in the Adopt-A-Catch Basin program	Not required
Adopt-A-Catch Basin	An ArcGIS Pro project package used by stormwater personnel to configure the Adopt-A-Catch Basin app and publish supporting web tools to ArcGIS Enterprise	GIS Professional Standard with Web tool publisher permission
Adopt-A-Catch Basin Manager	A Crowdsourcing Manager app used by stormwater personnel to manage Adopt-A-Catch Basin participants	Editor
Adopt-A-Catch Basin Dashboard	An ArcGIS Dashboards app used by stormwater personnel to monitor the Adopt-A-Catch Basin program	Viewer

When you deploy this solution in your ArcGIS organization, you also get an ArcGIS Solution item that organizes the key information products and summarizes all the ArcGIS items (applications, forms,

projects, maps, feature layers, feature layer views, and so on) included with the solution. The ArcGIS Solution item also illustrates any dependencies items have on each other.

Configure Adopt-A-Catch Basin

Learn how to configure the Adopt-A-Catch Basin solution to meet specific needs in your organization.

Publish the Adopt-A-Catch Basin app

The Adopt-A-Catch Basin solution includes an ArcGIS Pro project used to publish the Adopt-A-Catch Basin app. When you are ready to publish the app, a series of tasks is included to help you get started.

Get started

Use the ArcGIS Pro project to familiarize yourself with Adopt-A-Catch Basin.

- Sign in to your ArcGIS organization and browse to the Adopt-A-Catch Basin Project Package.
- Open the item page and click **Download**.
- Browse to and open the Adopt-A-Catch Basin project.
- On the **View** tab, in the **Windows** group, click **Catalog Pane**.
- In the **Catalog** pane, expand the **Tasks** folder, and double-click the **Adopt-A-Catch Basin** task.
- In the **Tasks** pane, expand the **Getting to Know Adopt-A-Catch Basin** task group.
- Double-click **Understanding Adopt-A-Catch Basin** task to review it.

Configure Adopt-A-Catch Basin

Use the ArcGIS Pro project to set up Adopt-A-Catch Basin.

- In the **Tasks** pane, expand the **Configure Adopt-A-Catch Basin** task group.
- Use the **Configure Adopt-A-Catch Basin** task group to access several tasks that guide you through:
 - Load your catch basins into the CatchBasin feature layer deployed with the solution.
 - Set up a user table in ArcGIS Enterprise to store program participants.
 - Publish the authentication geoprocessing webtool.
 - Configure the Adopt-A-Catch Basin app.

Contact participants

Use the ArcGIS Pro project to configure tools necessary for contacting participants in the Adopt-A-Catch Basin program.

- In the **Tasks** pane, expand the **Contact participants** task group.


The **Contact participants** task group contains tasks help you contact program participants by sending bulk emails or contacting a selection of participants by local or attribute.
- Follow the task instructions to configure the bulk email model with your SMTP server and contact participants.

Configure the Adopt-A-Catch Basin site


The Adopt-A-Catch Basin solution includes the Adopt-A-Catch Basin ArcGIS Hub site that your organization can configure with your branding and can use to share information about participating in the Adopt-A-Catch Basin program with the public.

Update with organizational information

After deploying the Adopt-A-Catch Basin solution, the Adopt-A-Catch Basin site layout only requires a few updates to fit your local context. Consider what information you already have and what you can most easily find. This information can include the following:

- Verify that you are signed in to your ArcGIS organization and browse to the Adopt-A-Catch Basin site.
- Open the item page and click **Configure App**.
- Click the edit button  to open the site editor.
- Scroll to the **Statistics** section listed under the title of the website.

The **Catch Basins Adopted**, **Cleaned This Month**, and **Clogged Catch Basins** statistics cards are already linked to the Adopt-A-Catch Basin solution's CatchBasins_public feature layer. These stats automatically update as participants adopt catch basins and report cleanings and issues using the Adopt-A-Catch Basin app.

- Scroll to the **Adopt a Catch Basin** section, hover over the card and click edit pencil .
- Click the **Adopt Catch Basin** button and click **Edit**.
- Enter the Adopt-A-Catch Basin app published using the Adopt-A-Basin ArcGIS Pro project URL into the **Link Destination** text box and click **Add Link** button.

Tip:

Browse to the Adopt-A-Catch Basin app. Open the item page, click **View Application**, and copy the app URL.

- Scroll to the **Frequently Asked Questions** section, hover over the card and click the edit pencil, and update the questions and answers.
- Scroll to the **Stormwater Data** section, hover over the card and click the edit pencil, and in the site editor under **Data** update the category links using tags, categories, or groups that reference your open data.

- To modify your site's footer, click **Customize Toggle**  on the side panel.
- Click **Footer**.

A custom footer is already provided, and in most cases, it needs to be updated with your organization's branding, contact information, and social media references.

- Click the **HTML** text box.

The **HTML** window appears.

- Make the necessary changes and click **Apply**.
- Click **Save**.

Share items with the public

Several layer views, maps and apps included in the Adopt-A-Catch Basin solution must be shared with everyone so they can be accessed by the public on the Adopt-A-Catch Basin site. To share your adopt-a-catch basin items with everyone, use the guide below and complete the following steps:

- Verify that you are signed in to your ArcGIS organization and browse to the Adopt-A-Catch Basin folder.
- Check the check box next to each of the items below:

Item	Name
Feature Layer (hosted, view)	CatchBasins_public
Web Map	Adopt-A-Catch Basin
Web Mapping Application	Adopt-A-Catch Basin
Hub Site Application	Adopt-A-Catch Basin
Hub Initiative	Adopt-A-Catch Basin

Note:

You will only have a Hub Initiative item if your organization has ArcGIS Hub Premium.

- Click **Share**.
- In the **Share** window, click **Everyone (public)** and click **Save**.

The **Warning: Sharing editable layers publicly** message appears notifying you that you are sharing editable layers publicly.

- Click **Update**.

Deploy related solutions


This site references content from the Citizen Problem Reporter solution. To deploy the Citizen Problem Reporter solution, see Citizen Problem Reporter and click **Deploy now**.

Update solution references

This site references a solution deployed in the previous section. To update your site, complete the following steps:

- Verify that you are signed in to your ArcGIS organization and browse to the Adopt-A-Catch Basin site.
- Open the item page and click **Configure App**.

- Click the edit button  to open the site editor.

- Scroll to the **Report a Problem** section.
- Hover over the **Submit Report** card and click edit pencil .
- Click on the **Submit Report** button and click **Edit**.
- Enter the Citizen Problem Reporter app URL in the **Link Destination** text box and click **Add Link** button.

Tip:

Browse to the Citizen Problem Reporter app. Open the item page, click **View Application**, and copy the app URL.

- Hover over the **Contact Call Center** card, click the edit pencil and edit the phone numbers in the card or remove if not applicable.
- Click **Save**.

[Share items with the public](#)

Several layer views, maps and apps included in the Citizen Problem Reporter solution must be shared with everyone so they can be accessed by the public on the Adopt-A-Catch Basin site. To share your citizen problem reporter items with everyone, use the guide below and complete the following steps:

- Verify that you are signed in to your ArcGIS organization and browse to the Citizen Problem Reporter folder.
- Check the check box next to each of the items below:

Item	Name
Feature Layer (hosted, view)	CitizenProblems_health
Feature Layer (hosted, view)	CitizenProblems_utility
Feature Layer (hosted, view)	CitizenProblems_blight
Feature Layer (hosted, view)	CitizenProblems_road
Feature Layer (hosted, view)	CitizenProblems_animal
Feature Layer (hosted, view)	CitizenProblems_parktree
Feature Layer (hosted, view)	CitizenProblems_trash
Feature Layer (hosted, view)	CitizenProblems_landuse
Feature Layer (hosted, view)	CitizenProblems_snowice
Web Map	Health Problems
Web Map	Water / Sewer Problems
Web Map	Blight Problems
Web Map	Road Problems
Web Map	Animal Problems

Web Map	Park / Tree Problems
Web Map	Trash Problems
Web Map	Land Use Problems
Web Map	Snow / Ice Problems
Web Mapping Application	Citizen Problem Reporter

- Click **Share**.
- In the **Share** window, click **Everyone (public)** and click **Save**.

The **Warning: Sharing editable layers publicly** message appears notifying you that you are sharing editable layers publicly.

- Click **Update**.

Adopta widget settings

The Adopt-A-Catch Basin app uses the Adopta widget with preconfigured settings and actions. Optionally, you can modify and expand the Adopta widget's settings to meet your organization's needs. Use the tables below to understand the Adopta widget's configuration settings and capabilities.

Layer and Authentication settings

The Layer and Authentication settings allow you to configure behaviors as well as the look and feel of the user interface.

Setting	Description
Asset nickname field	Field that stores the catch basin's nickname.
Login screen message	Message that appears when signing into the application.
Additional signup field	Fields in the UserTable to be displayed in the sign up form in addition to email—for example, add first and last name, address, and phone number.
Show asset address	Display the reverse geocoded address of a catch basin in the details view.
Asset highlight color	Color of selection symbol displayed around the catch basin symbol when it is selected on the map.
Tolerance setting	New catch basins are created if no asset is found within the tolerance.
My asset symbol	Choose a symbol and set the size of user-adopted catch basins.

Actions

The primary actions used for the Adopt-A-Catch Basin app are assign (Adopt) and unassign (Opt out). You can configure additional actions as needed.

Setting	Description
Assign status	Allows you to label the button (Adopt) in the asset detail view and specify

settings	additional actions that occur after clicking the assign status button.
Unassigned status settings	Allows you to configure the unassigned label (Abandoned) in the asset detail view and specify additional actions that occur after clicking the unassigned label.
Additional status settings	Allows you add additional actions you want adopters to report on—for example, a damaged catch basins.
Primary Status	Displays text and status buttons in the Adopta application—for example, Is the catch basin cleaned?
Before action image	Image that is displayed before performing an action.
After action image	Image that is displayed after performing an action.

Messages

The Adopt-A-Catch Basin app displays messages based on user interaction—for example, Thank you for adopting catch basin name. You can modify messages or create additional messages according to your organization’s needs.

Setting	Description
Assign	Message displayed when an asset is successfully assigned. Use '{assetTitle}', for example, to display the title of asset in message.
Unassign	Message displayed when an asset is successfully unassigned.
Action	Message displayed when action is successfully completed. Use '{actionName}', for example, to display the name of action in message.
Asset not found	Message displayed when asset is not found.
Asset already assigned	Message displayed when asset is already assigned. Use '{assetTitle}', for example, to display the title of asset in message.
Unable to perform action	Message displayed when action is not successful. Use '{actionName}', for example, to display the name of the action message.
Asset creation	Message displayed when creating a new asset. Use '{layerName}', for example, to display the name of the layer in message.
Create asset failed	Message displayed when asset creating fails.
User token expired	Message displayed when user token is expired and generated.
Signup/Login success	Message displayed after successful sign up or log in.
Home screen (when logged in)	Message displayed in widgets home screen after user logs in to the application.
Cursor tooltip before login	Message displayed when the user hovers over the map with their pointer before signing in to the application.
Cursor tooltip after login	Message displayed when the user hovers over the map with their pointer after signing in to the application.
Nickname hint	The text displayed in the nickname hint text box.

Use Adopt-A-Catch Basin

The Adopt-A-Catch Basin solution delivers a set of capabilities that help you engage volunteers to keep catch basins clear of debris and functioning properly, manage participants, and monitor the adoption program.

In this topic, you'll learn how to use the solution by assuming the role of a user and performing the workflows below.

Note:

Use the links below to try the apps with sample data provided by Esri, or use the workflows as a guide for using your own configured apps.

Adopt a catch basin

You'll assume the role of a resident in the community who wants to participate in your city's adopt-a-catch basin program. You'll use the Adopt-A-Catch Basin app to adopt a catch basin near your home and report its condition.

- In a browser, go to the Adopt-A-Catch Basin site.
- Scroll to the **Adopt a Catch Basin** section, and click the **Adopt Catch Basin** button to open the Adopt-A-Catch Basin app.
- Enter your email in the **Enter email address** text box and click **Login/Sign Up** to sign up and begin the adoption process. Enter your contact details in the subsequent form and click **Sign Up**.

The Adopt-A-Catch Basin app sends an email with program details and a link you will use to log in to the app.

- In the email, click **Login**.

Returning users also receive an email with a link used to sign in to the app.

The Adopt-A-Catch Basin app opens in a browser with your newly created user authenticated. Notice the instructions to select a catch basin on map to adopt.


- Select an available catch basin to adopt (the green symbols on the map). Optionally, add a nickname to your catch basin in the text box. Click **Adopt Catch Basin**.

Adopt-A-Catch Basin displays a thank you message. The Adopt-A-Catch Basin pane displays your adopted catch basin and allows you to report the condition of the catch basin (for example, cleaned, clogged, or damaged), or abandon the catch basin. You can use the Adopt-A-Catch Basin app to regularly report cleanings and condition.

Manage adoptions and participants

You are now a public works agency employee managing the catch basing adoption program. You will use Adopt-A-Catch Basin Manager to resolve reported issues and contact program participants.

- In a browser, go to the Adopt-A-Catch Basin Manager app.
- In the app, click the **Last Known Condition** column filter.
- Click **Last Known Condition** drop-down arrow and choose **Damaged** to view all reported damaged catch basins.

- Click one of the catch basins to view its details.
Public Works has repaired the catch basin. You'll use the Adopt-A-Catch Basin Manager app to contact the adopter to let them know the catch basin has been repaired.
- Click the **Email Adopter** button in the lower left corner of the app.
Adopt-A-Catch Basin Manager opens your email client and presents a preformatted subject.
- In the app, click the **Edit** button  .
- Click the **Last Known Condition** drop-down arrow to **No Issues**.
- Click **Save**.
- Optionally, click the **Manage User's Catch Basin** button to open the Adopt-A-Catch Basin app and manage the catch basins adopted by the selected user.
You can use this workflow to remove an adopter from a catch basin, making it available for adoption.

Monitor the program

You will continue your role as a public works employee, this time looking to monitor the Adopt-A-Catch Basin program. You will use the Adopt-A-Catch Basin Dashboard to review key metrics and trends.

- In a browser, go to the Adopt-A-Catch Basin Dashboard app.
The Adopt-A-Catch Basin Dashboard displays new adoptions and cleaning charts by month and provides management a quick view of program activity over time.
- On the **Overview** tab, review the high-level metrics.
- Click the **Catch Basin** tab at the bottom of the dashboard.
- Click the arrow on the left of the app to display additional filters.
- Use the filters in the left panel to explore catch basin status, condition, visibility and last cleaned.

Tip:

Dashboard charts are linked. If you click on a month in either **New Adoptions by Month** or **Cleanings by Month** charts, related details are filtered and updated in other elements in the dashboard.

- Select a catch basin from the **Catch Basins** list or the map to view key details. Optionally, click the **Manage Asset** button in the pop-up to launch the Adopt-A-Catch Basin Manager app.