



Presented By:

Eva Cancino, GIS Coordinator &

Desiree Poole, GIS Specialist

The City of Naperville



City of Naperville

- 145,000 Residents
- 39 Square Miles
- Located in DuPage and Will Counties
- 4th Largest City in Illinois



High School Internship

- 4-6 Interns
- 8-week summer internship.
- Learn about municipal government.
- 2-3 Projects that focus on improving our City either internally/externally.



Waubonsie Valley
High School



Neuqua Valley
High School



Naperville North
High School



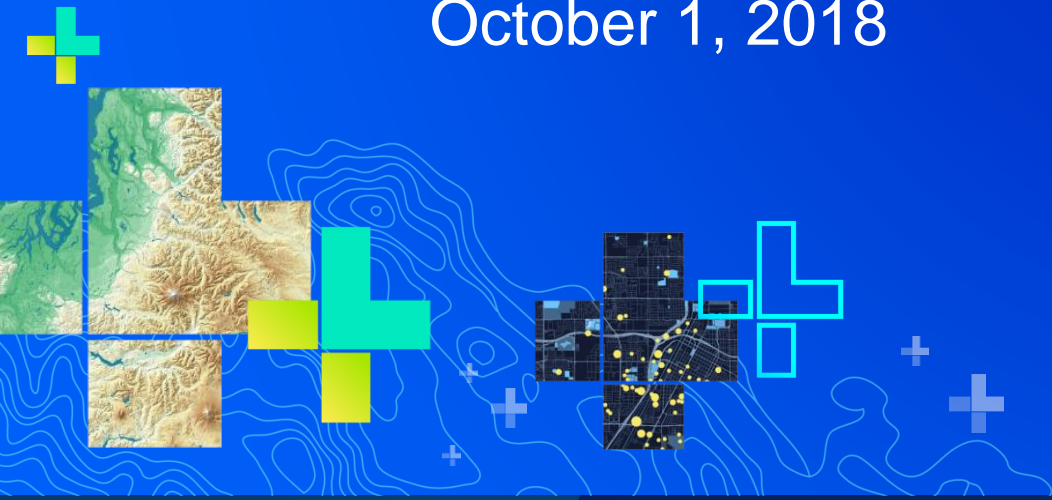
Naperville Central
High School



Metea Valley
High School

Adopt-a-Drain

- Benefits:
 - Prevent street flooding
 - Reduce pollution
 - Help protect local waterways.
- 14,000 storm drains available for adoption. (Drains located on neighborhood streets, under 35mph)
- Official Roll-out date:
October 1, 2018



Graphic Design

How to Adopt a Drain



1. Find it

Use our interactive map to search for a drain near you



2. Claim it

Use our registration form to claim and name your drain



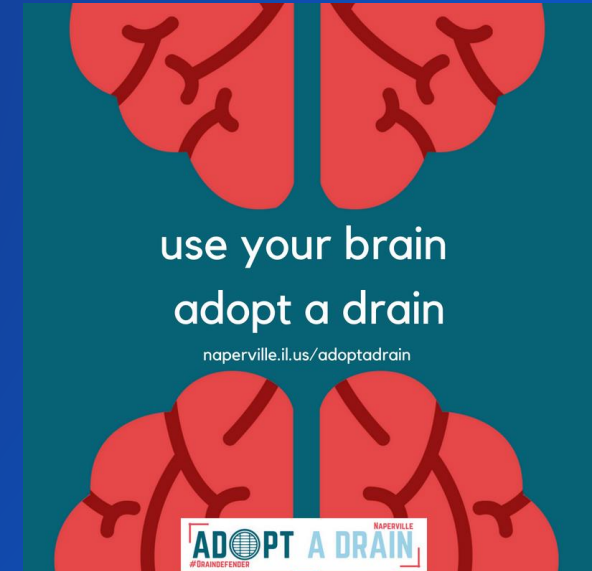
3. Clean it

Sweep the drain and 10 ft around it before rainstorms



4. Share it

Tweet your photos using #DrainDefender and tag us



Welcome Drain Defenders

March

Ice and snow will begin to melt, leading to water in the streets, and hopefully down the drains.



April

April showers will typically bring heavier rainfall.



June

The grass is starting to grow and people are starting to mow. Grass clippings often clog drains.



October

The leaves are starting to fall and they can quickly clog the drains.



1. Gather your materials.

Use the provided materials list. Be sure to wear gloves and reflective clothing.



2. Pick up any garbage and put it in the trash bag.

Plastic items can be recycled and other garbage can go in the trash.



3. Clear off the top of the drain and the area surrounding it.

Try not to push the leaves or grass into the drain. Clear a 10 ft. radius around the drain.



4. Put the organic materials in a yard waste bag.

Grass clippings and leaves can go into a standard yard waste bag for collection.



While cleaning the drains is important, safety is our utmost priority.

- Wear appropriate clothing and shoes, including a reflective safety vest at all times.
- Avoid items that are hazardous or may cause injury to you or others.
- Be aware of your surroundings.
- DO NOT lift the drain grate.

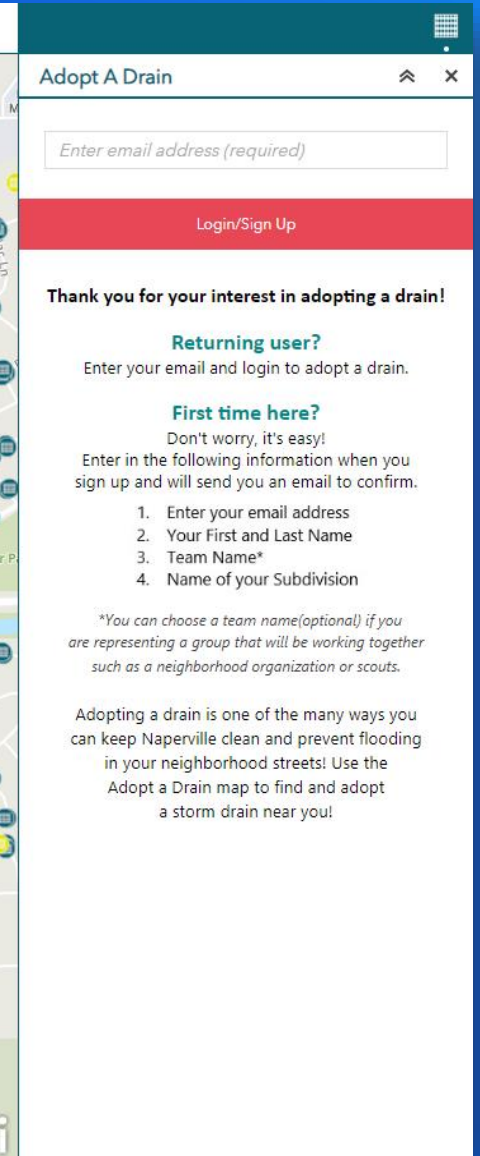
Communications Department

Communications Plan

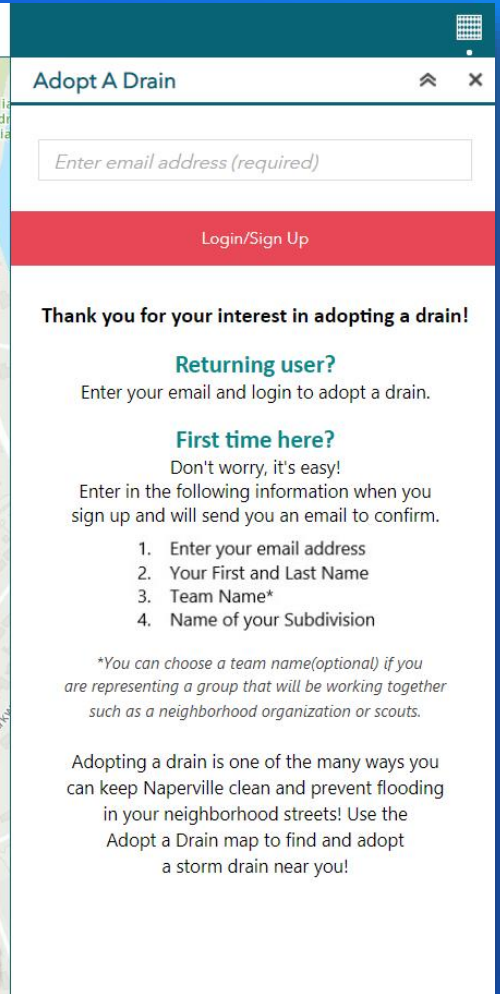
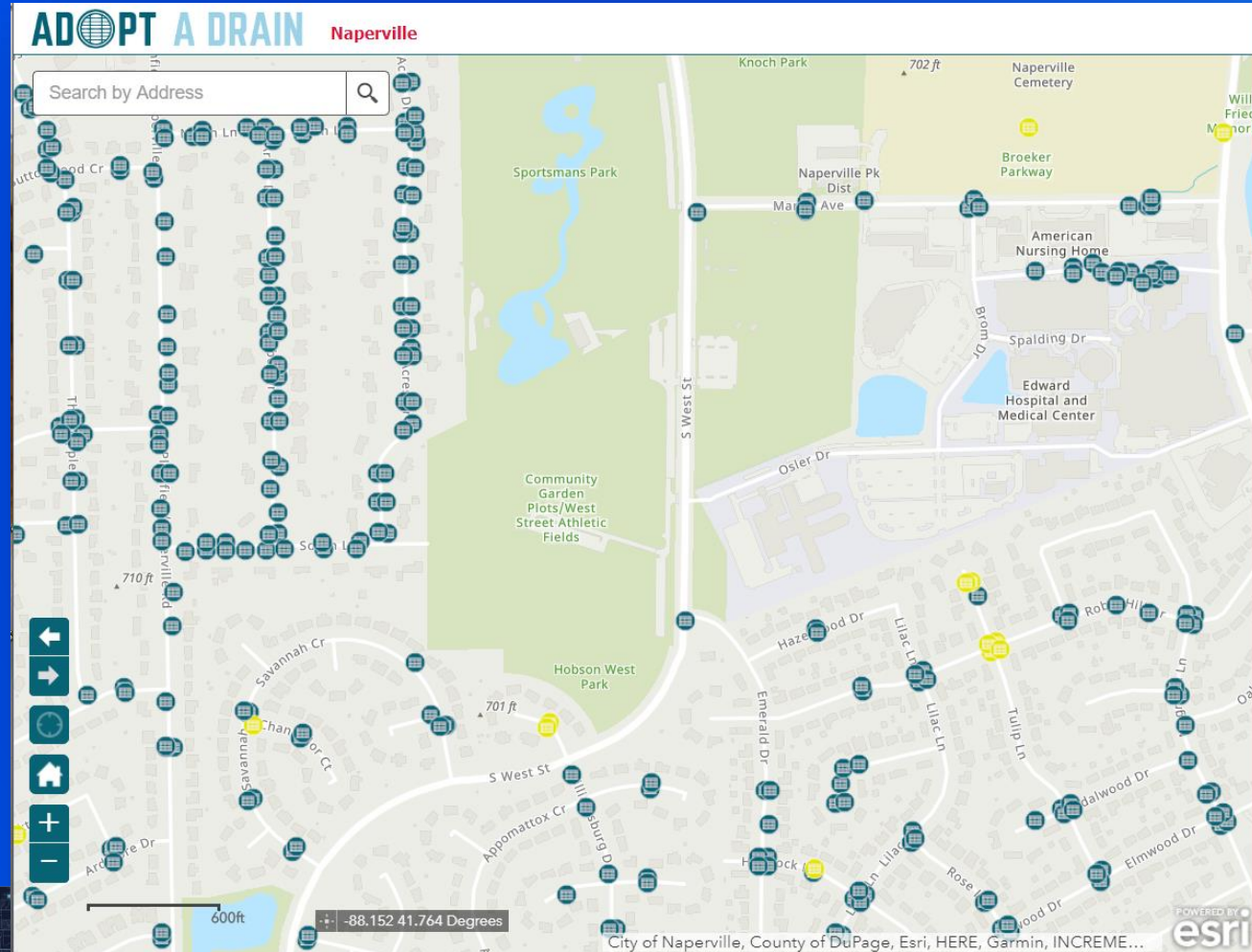
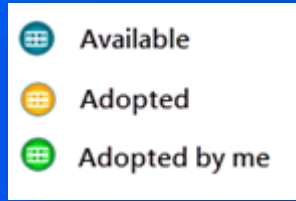
- Monthly Incentives
 - Created a Budget for Prizes
- Monthly/Quarterly Newsletters
- Social Media Calendar
- End of Year Survey



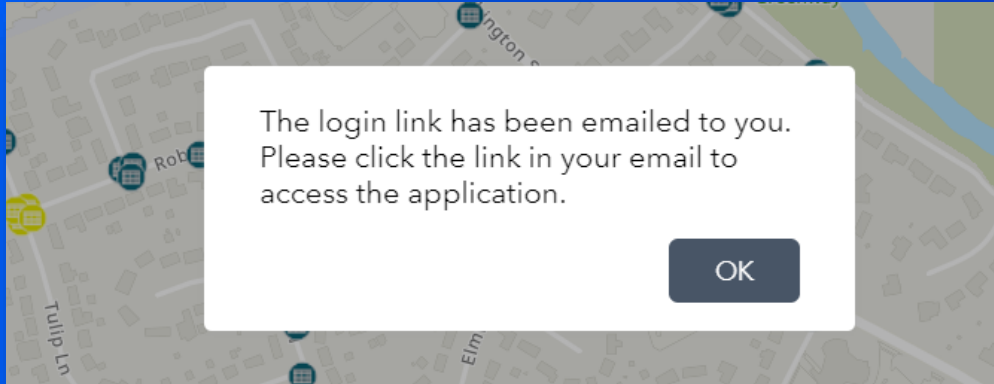
Adopta



How to Adopt a Drain



How to Adopt a Drain



Welcome to the City of Naperville Adopt a Drain Program,
and thank you for participating!

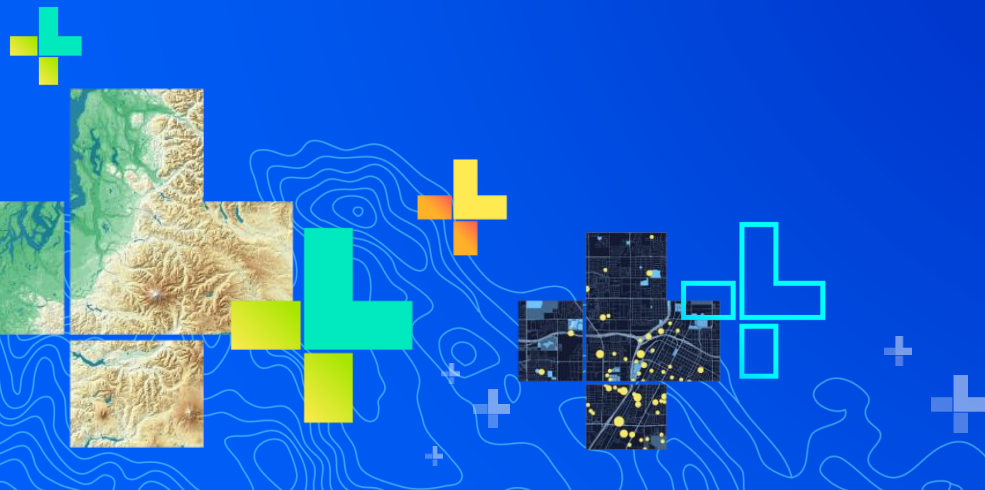


To participate, you must read the terms of the agreement, and complete and sign the accompanying liability waiver attached to the email received when the drain is adopted.

[Adopt a Drain Waiver.pdf](#)

1. Remove debris from grates - The grates of the storm drains can become clogged with litter or leaves, especially in the spring and fall.
2. Ensure regular cleaning - The area under the grate should be cleaned out if debris becomes lodged in the storm drains.
3. Monitor your email - we will send periodic weather updates and a way to update the status of your adopted storm drains.

[Click this link to Login and use the app](#)



How to Adopt a Drain

The screenshot displays the 'Adopt A Drain' web application interface. On the left, a map shows a residential area with streets like Ada Ln, Mortonsberry Dr, Rickert Dr, and Book Ct. A green icon representing a drain is highlighted on Ada Ln. A white disclaimer box is overlaid on the map, containing the following text:

gis.naperville.il.us says

I acknowledge and fully understand that there may be certain inherent risks or other dangers, apparent or hidden, known or unknown, that are associated with my involvement in the Program, and I thereby knowingly, freely, and voluntarily release and discharge the City, its officers, agents, volunteers, and representatives from any claims, liabilities, damages, and all causes of action of any nature incurred by me arising out of, or which may arise in the future, my participation in the Program. I further agree to indemnify and hold harmless the City and all other released parties from any claims arising out of my actions in the Program. I assume full responsibility.

Below the disclaimer are 'OK' and 'Cancel' buttons.

On the right, the 'Adopt A Drain' form is visible. It includes the 'ADOPT A DRAIN' logo and the following information:

- Nickname:
- Storm Drain ID: 6214
- Current Status: Available
- Adopted On:
- Last Cleaned on:
- [Submit a photo of your drain!](#)
- [Report an issue with your drain](#)

Below this information is a 'Street Address' field with the value '1103 Book Rd' and a zip code field with the value '47'. A text input field contains the nickname 'Bob'. An 'Adopt' button is located at the bottom right of the form.

Overlaid on the bottom right is a confirmation message box that says: 'Thank you for adopting Bob' with an 'OK' button.

How to Adopt a Drain

Updated status Cleaned Storm Drain!
successfully

OK

Street Address
425 S Webster St

47

Bob

Update

Cleaned Storm Drain! ✓

Abandon Drain ✓

cancinoe@naperville.il.us (1)

How to Adopt a Drain

Welcome back!



Please use the link below to Log back into the Adopt-a-Drain App

[Launch the Adopt-a-Drain App](#)

Storm Drains adopted by you:

You can update the status by clicking on the links below

No assets adopted yet

Use the Adopt-a-Drain App to submit a photo of your drain, report any issues and report the storm drain as having been cleaned.

If you decide you no longer want to participate in the program, simply sign in to the application and select "abandon drain."

[Click here to learn more about the Adopt-A-Drain Program](#)

[Contact us](#) if you have any additional questions regarding the program



Configuring the App

Going Hybrid



- The Adopt a Drain Web map is entirely Cloud-based
 - ArcGIS Server 10.5.1 in Azure
 - SQL Server 2014 Database in Azure



Configuring the App


- Customizing the Pop-up
- Add a Waiver
- The Geoprocessing Tool




Configuring the App


Customizing the Pop-up

Adopt A Drain



Nickname: Bob
Storm Drain ID: 12693
Current Status: Adopted
Adopted On: 11/14/2018, 3:50 PM
Last Cleaned on: 11/14/2018, 3:51 PM
[Submit a photo of your drain!](#)
[Report an issue with your drain](#)

 **If this is an emergency, please dial 911.**

 **Submit a Request**

Use this page to ask a question, submit a records/FOIA request, or initiate a service request. To narrow your search, use the category dropdown list or keyword search feature below.

Category:

Keyword Search:
(Optional)

Service Request Type	Description
Ask A Question	Ask a Question / Submit a Concern / Leave a Comment
CERT Training	Community Emergency Response Team Training Registration
NEMA Application	Naperville Emergency Management Agency Application
Police Certificate/Background	Please use this to request a Police Certificate or Background check.



Configuring the App

Customizing the Pop-up

Custom Attribute Display

Use the area below to define, format, and lay out the information you want to display.

B I U |


Font Size

Nickname: {Nickname}
Storm Drain ID: {OBJECTID}
Current Status: {Assetstatus}
Adopted On: {Adopteddate}
Last Cleaned on: {Lastcleaneddate}
[Submit a photo of your drain!](#)
[Report an issue with your drain](#)

OK CANCEL

ADOPT A DRAIN

Nickname: Stormy
Storm Drain ID: 32133
Current Status: Adopted
Adopted On: 11/3/2018, 1:33 PM
Last Cleaned on: 11/4/2018, 5:32 PM
[Submit a photo of your drain!](#)
[Report an issue with your drain](#)



[Zoom to](#) [Edit](#) [Get Directions](#)

Configuring the App Customizing the Pop-up

- **What didn't work:**

- Enabling Photo Attachments
- AGO Supports Blobs as Links but not embedded images

- **This did work:**

- Host Photos on AGO
- Embed Photo in a popup



Configuring the App

Adding a Legal Waiver



WAIVER AND RELEASE OF CLAIMS FOR THE CITY OF NAPERVILLE

I, _____, the undersigned, in consideration for permission by the City of Naperville ("the City"), hereby agree to participate as a volunteer in the City's Adopt-A-Drain Program ("the Program"), and agree to the terms and conditions of this WAIVER and RELEASE.

I acknowledge and fully understand that there may be certain inherent risks or other dangers, apparent or hidden, known or unknown, that are associated with my involvement in the Program, and I thereby knowingly, freely, and voluntarily release and discharge the City, its officers, agents, volunteers, and representatives from any claims, liabilities, damages, and all causes of action of any nature incurred by me arising out of, or which may arise in the future, my participation in the Program. I further agree to indemnify and hold harmless the City and all other released parties from any claims arising out of my actions in the Program. I assume full responsibility for my actions as a participant in the Program in which the risk of personal injury, loss, death, or property damage may occur, whether through negligence or otherwise, and further agree not to intentionally damage, deface, or permanently alter any drain owned by the City.

I understand and agree that by my participation in the Program, I am not entering into a contract for employment with the City and am acting completely voluntarily and am not entitled to payment for any services rendered. I further agree that the City and all other released parties may use my likeness or photograph and name in any manner relating to my participation in the Program free of charge and without further notice or consultation.

If the undersigned is under eighteen (18) years of age, then his or her parent or guardian must consent to participation and sign the WAIVER and RELEASE form.

I have read and fully understand the nature of this WAIVER and RELEASE.

Participant's Name (Print) _____

Organization _____

Home Address _____

Organization Address _____

City _____ Zip Code _____

Organization Contact Person _____

Daytime Phone # _____

Contact Person Phone # _____

Evening Phone # _____

e-mail Address _____

Signature of Participant _____

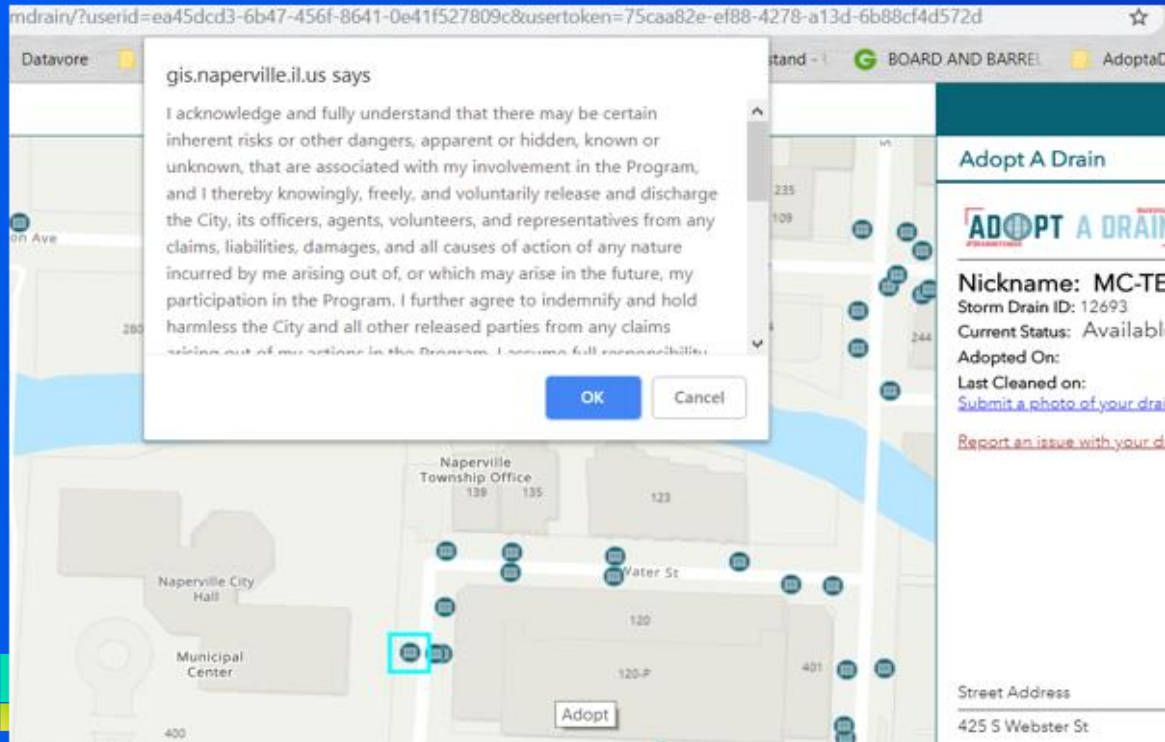
Date _____

Signature of Parent/Guardian _____

Date _____

Configuring the App

Adding a Legal Waiver



Assetdetails.js

Add following to `assetdetails.js`

```
/**
 * Function to adopt an selected asset
 * @param {object} current selected feature
 * @memberOf widgets/Adopta/AssetDetails
 */
_adoptAsset: function (selectedFeature) {
    if (confirm("I acknowledge and fully understand that there may be certain inherent risks or other dangers, apparent or hidden, known or unknown, that are associated with my involvement in the Program, and I thereby knowingly, freely, and voluntarily release and discharge the City, its officers, agents, volunteers, and representatives from any claims, liabilities, damages, and all causes of action of any nature incurred by me arising out of, or which may arise in the future, my participation in the Program. I further agree to indemnify and hold harmless the City and all other released parties from any claims arising out of my actions in the Program. I assume full responsibility for my actions as a participant in the Program in which the risk of personal injury, loss, death, or property damage may occur, whether through negligence or otherwise, and further agree not to intentionally damage, deface, or permanently alter any drain owned by the City. I understand and agree that by my participation in the Program, I am not entering into a contract for employment with the City and am acting completely voluntarily and am not entitled to payment for any services rendered. I further agree that the City and all other released parties may use my likeness or photograph and name in any manner relating to my participation in the Program free of charge and without further notice or consultation. If the undersigned is under eighteen (18) years of age, then his or her parent or guardian must consent to participation and agree to this WAIVER and RELEASE. I have read and fully understand the nature of this WAIVER and RELEASE.")) {
        //Add users guid into asset to identify which asset belongs to user
        selectedFeature.attributes[this.config.foreignKeyFieldForUserTable] = "{" + this.config.userDetails[this.config.foreignKeyFieldForUserTable] + "}";
        this.updateFieldsForAction(this.config.actions.assign.name, selectedFeature, true);
    } else {
    }
}
```


Lessons Learned

- Extending Configurable Templates



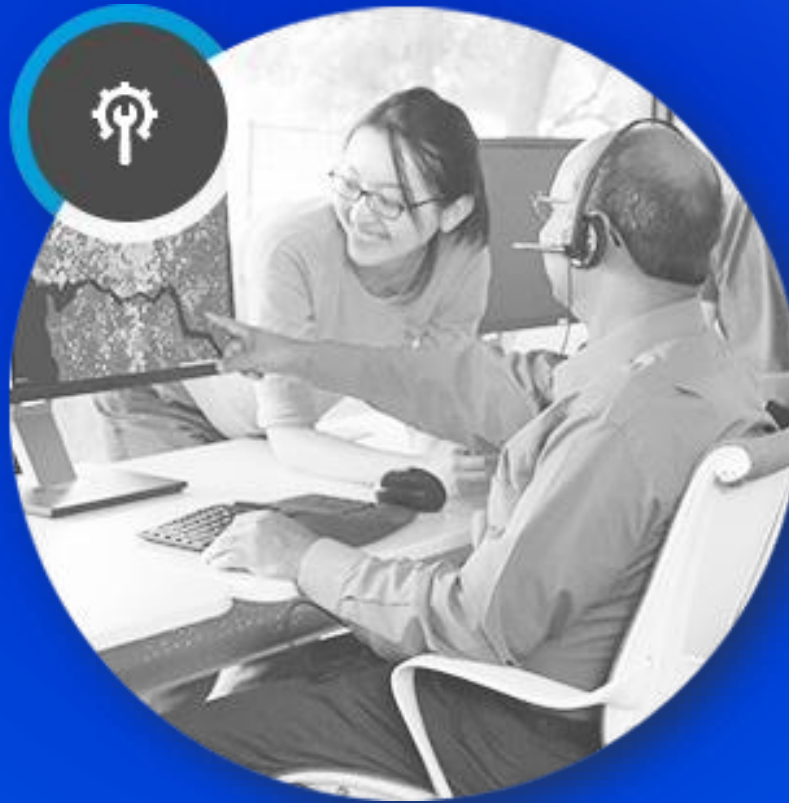
April 2019 Flood Event
Naperville, Illinois

"These kids are VERY excited about cleaning drains."



Lessons Learned

- Utilizing ESRI Support

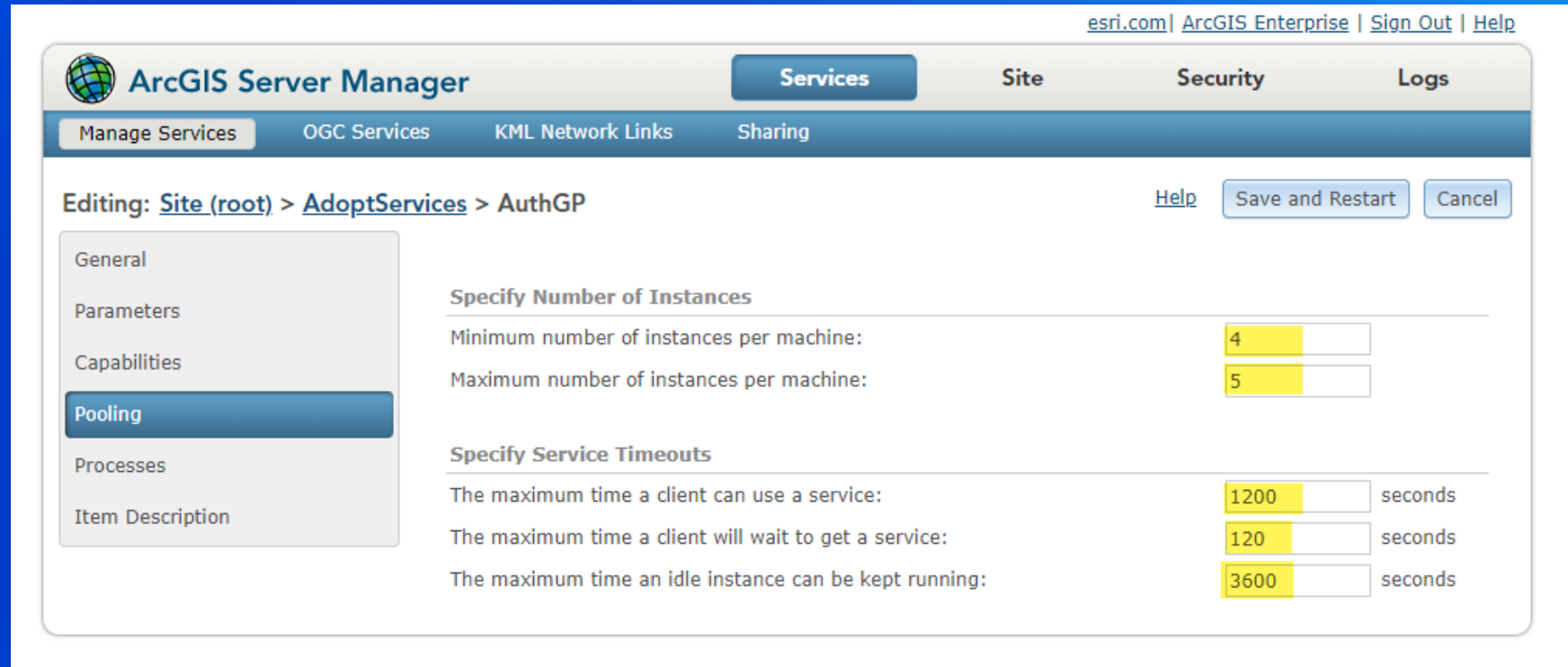


Support



Lessons Learned

- App popularity and the geoprocessing service



The screenshot displays the ArcGIS Server Manager web interface. At the top, there are navigation tabs for 'Services', 'Site', 'Security', and 'Logs'. Below these, a sub-navigation bar includes 'Manage Services', 'OGC Services', 'KML Network Links', and 'Sharing'. The main content area shows the configuration for the 'AuthGP' service under the 'AdoptServices' site. A left-hand menu lists configuration categories: General, Parameters, Capabilities, Pooling (which is currently selected), Processes, and Item Description. The 'Pooling' section contains two sub-sections: 'Specify Number of Instances' and 'Specify Service Timeouts'. The first sub-section has two input fields: 'Minimum number of instances per machine' set to 4 and 'Maximum number of instances per machine' set to 5. The second sub-section has three input fields: 'The maximum time a client can use a service' set to 1200 seconds, 'The maximum time a client will wait to get a service' set to 120 seconds, and 'The maximum time an idle instance can be kept running' set to 3600 seconds. At the top right of the configuration area, there are links for 'esri.com', 'ArcGIS Enterprise', 'Sign Out', and 'Help', along with 'Save and Restart' and 'Cancel' buttons.

esri.com | ArcGIS Enterprise | Sign Out | Help

ArcGIS Server Manager

Services Site Security Logs

Manage Services OGC Services KML Network Links Sharing

Editing: [Site \(root\)](#) > [AdoptServices](#) > [AuthGP](#) [Help](#) [Save and Restart](#) [Cancel](#)

General
Parameters
Capabilities
Pooling
Processes
Item Description

Specify Number of Instances

Minimum number of instances per machine: 4

Maximum number of instances per machine: 5

Specify Service Timeouts

The maximum time a client can use a service: 1200 seconds

The maximum time a client will wait to get a service: 120 seconds

The maximum time an idle instance can be kept running: 3600 seconds

Program Success

Total Number of Drains in City

57,160

City of Naperville

Subdivisions Participating

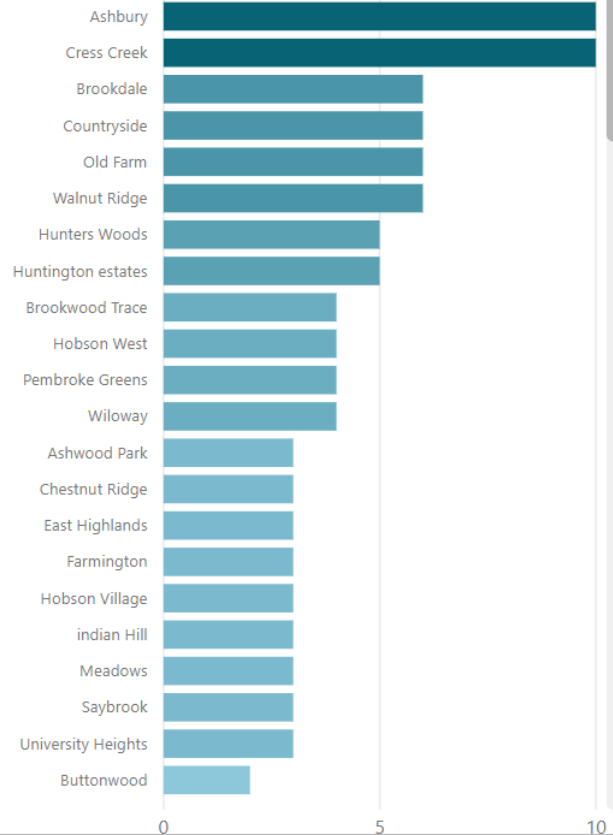
118

Drains Adopted

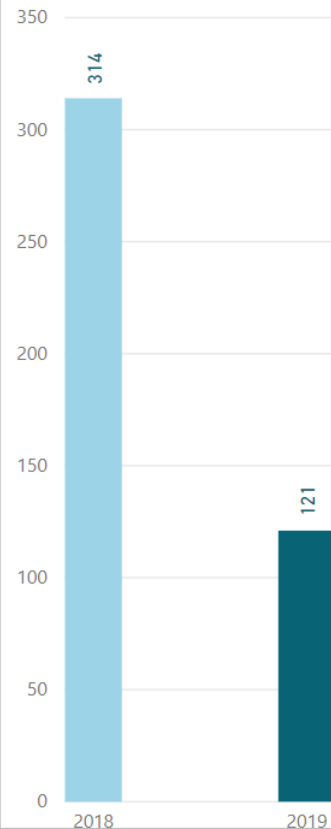
435

Number of Adopters

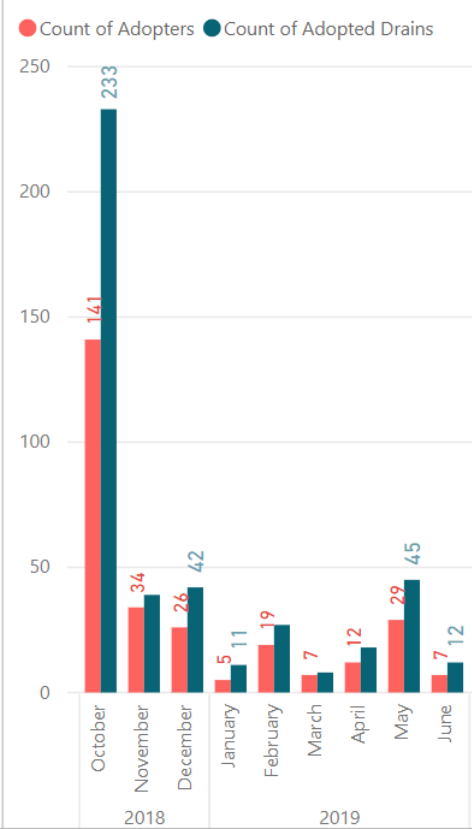
255



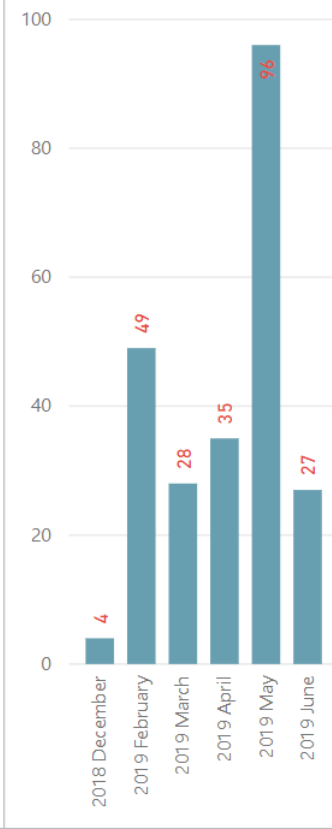
Drains Adopted per Year



Adopted Drains per Month



Active Participants



Drain Nicknames

- Drain Names
- Zues
 - Zain's Drain
 - Wych-ed Flo
 - Wisker Drain
 - Wile E Coyote
 - Whirly 3
 - Whirly 2
 - Whirly 1
 - What's That Lassie? Timmy fel drain?
 - West Side 711 N Sleight
 - Water Eater
 - VC3
 - VC2
 - VC1
 - Understanding
 - Under The Lightpole
 - Twig Collector
 - Troop 101
 - Tomorrow's Drink
 - Tippy

Important things to Consider



Keeping People Engaged

Easter Egg Hunt Contest!



Email from Resident:

Oh fun. Thanks. Kudos to whomever thought of this idea. For the first time in my life I noticed every drain I past by. They do need some TLC.

*Thanks.
Alex Zain*

Gratitude

Appreciation



Funny Drain Names

- Bob Ross Happy Little Drain
- Come Drain or Come Shine
- Leaves have no Home Here
- Evil Clown's Lair
- Mulder
- Scully
- Wyched-ed Flow
- Pizza delivery for "122 1/8th"
- H2 ohhhhhh
- Pennywise's Domain
- The RV tank is full
- The Pitbull "Mr. Worldwide" Memorial Storm Drain
- The Cornell Pool (sometimes)
- Snakes on a Drain
- Leaves have no home here
- InsaneInTheMemDrain
- Grate Expectations
- Alexander the Grate



...and Phteen

Questions?

