Using ArcGIS Online for IDDE Inspections

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INAFSM Conf
9/9/16

Today's Presentation

This session will cover the use of ESRI's ArcGIS online mapping and GeoForm as well as Microsoft OneDrive Cloud Storage products for smartphones and tablets in the field. From setting up your ArcGIS online map and GeoForm to creating a fillable word document, this presentation will show participants how mobile GIS apps and cloud storage can be used to capture data and get it to the decision makers in a timely manner.

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Outline of Today's Presentation

➢ Setting up AGOL - Data and Map
  ➢ get data into AGOL cloud
  ➢ create maps with data
➢ Creating the GeoForm
  ➢ customizable for your need
➢ Microsoft OneDrive
  ➢ cloud storage
  ➢ Inspection Form
➢ IDDE Inspection process
  ➢ Previous and coming year
➢ Conclusion

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Setting up AGOL - Data and Map

➢ This actually begins with your desktop GIS
➢ Prepare or get access to the following data
  ➢ Storm data
    ➢ Especially Outfalls
    ➢ Create/Update Domains (drop down boxes)
      ➢ Helps with data consistency
    ➢ Pictures are nice
  ➢ Location Data
    ➢ Parcels, address points, subdivisions, commercial, contours, etc.
  ➢ Editing Layer(s)
    ➢ Create way for users to create/edit data in the field
    ➢ This is also needed to create a GeoForm

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Setting up AGOL - Data and Map

➢ Time to upload data to AGOL - Steps for uploading
   ➢ On your desktop GIS set symbology to the desired color(s)/symbol(s)
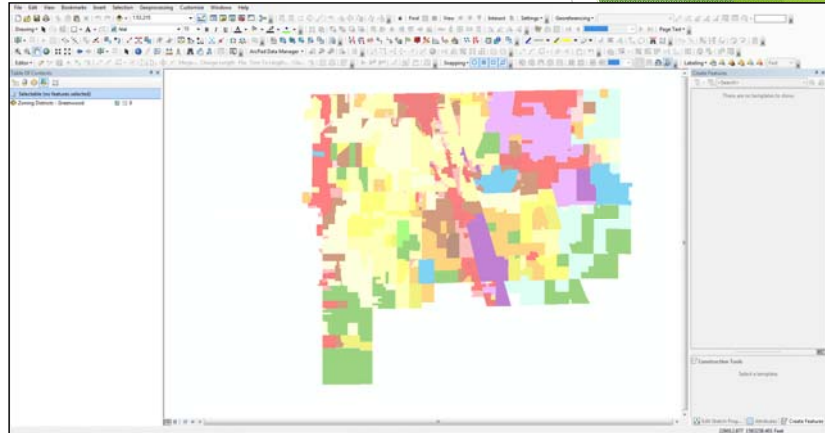
Setting up AGOL - Data and Map

➢ Go to File, log in to Online account (if not already logged in), and Share As>Service

➢ Select 'Publish a Service' to name the Service
   ➢ make sure that 'Choose a Connection' is set to your Online account
   ➢ this is also where you can connect to Arc Server if you have that available
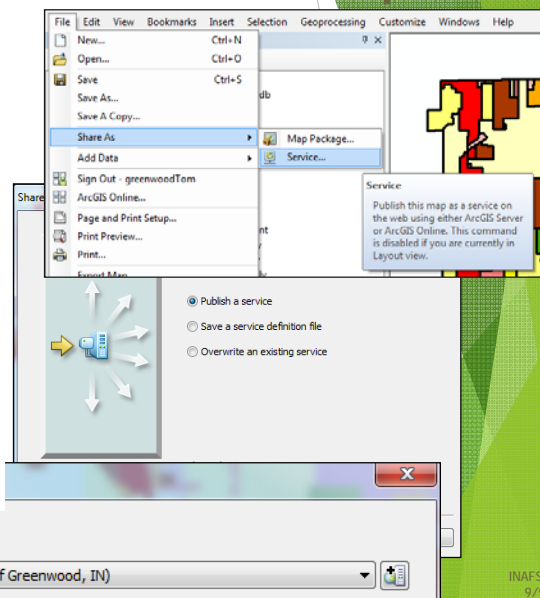
Setting up AGOL - Service Editor

➤Parameters – leave default

➤Capabilities – turn off Tiled Mapping/ turn on Feature Access

➤Turn on operations depending on function of layer
➤Update is especially needed if plan on editing

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Setting up AGOL - Service Editor

➤Item Description
➤fill out accordingly
➤Summary and Tags required
➤Description optional but useful

➤Sharing – Everyone (public/private)
➤Depends on your organization needs

➤ Lastly preview (if desired) before Publishing
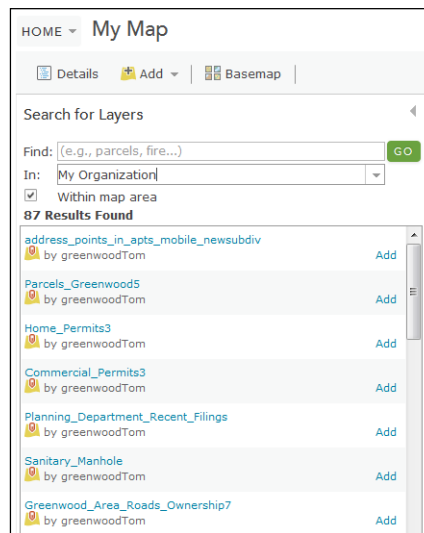
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Setting up an AGOL Map

- Open a new map and use 'Add' button
  - Various types of data available
  - I use the 'Search for Layers' option
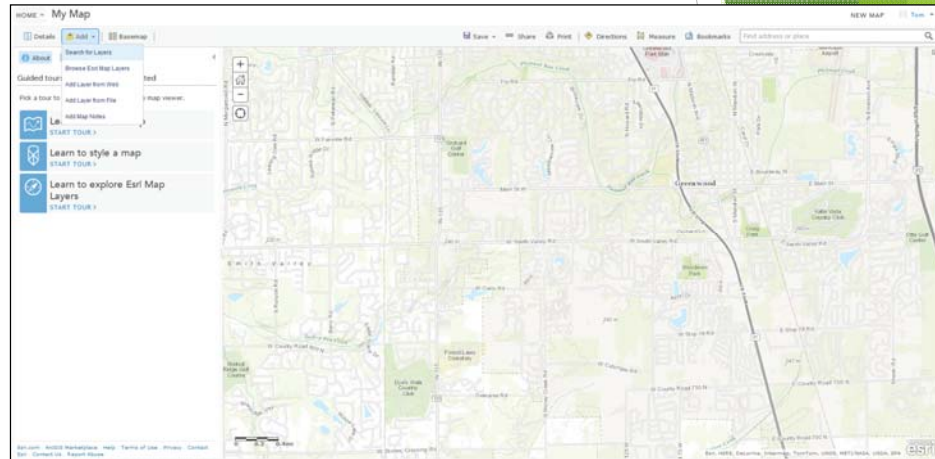
Setting up an AGOL Map

- Search for Layers from My Organization or A GIS Server
  - Can also add data from
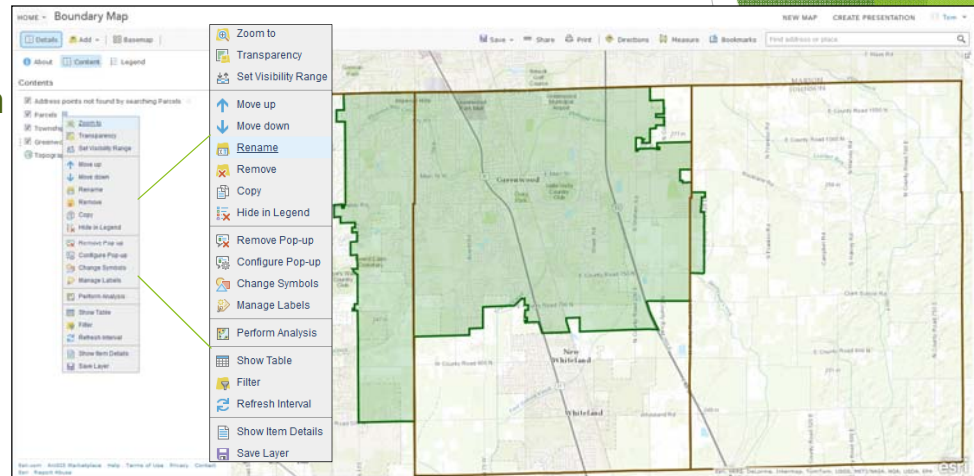   - other users who've made their data public
    - ESRI map layers

Setting up an AGOL Map

➢ After I add layers then I configure each layer and 'design' the map

➢ Can save configurations for individual layers to be used in other maps

Setting up an AGOL Map

➢ Once the map is 'designed' it is time to Share
  ➢ My maps are shared to everyone as I don't have enough users in my groups
➢ Decide if want to embed or make web application
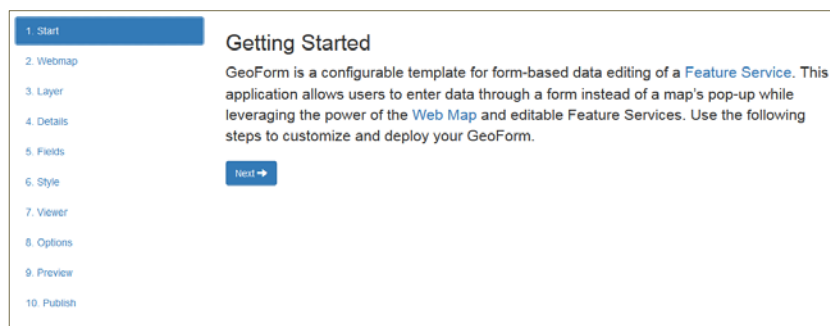 ➢ I've only made web application maps

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Setting up an AGOL Map

➤ Many types Web App's to create
➤ We will now discuss designing and publishing a GeoForm
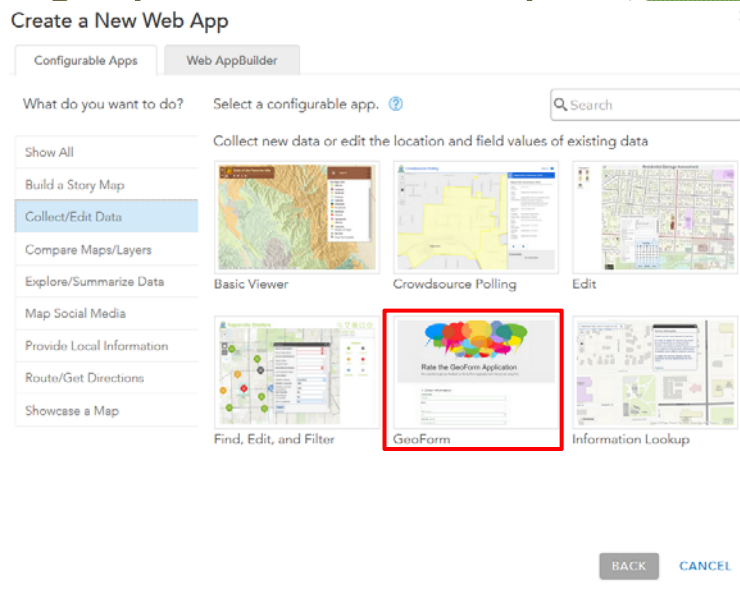
Setting up an AGOL GeoForm

➤Esri provides a nice 'wizard' to walk you through setting up a GeoForm
➤10 steps
  ➤Some steps are more involved than others
➤Does allow for customization on how you want form to look/feel

Setting up an AGOL GeoForm

➢Begin my selecting a Webmap
➢Can choose any map in your arsenal
➢One prerequisite is that you must have a layer(s) that you can edit
➢Use step 3 to select the layer(s) you want to use the GeoForm to edit
  ➢I've never used more than 1 layer at a time to edit in a GeoForm

Setting up an AGOL GeoForm

➢Now you get the chance in step 4 to start customizing the GeoForm
➢Header size
➢Title – same as Webmap or new name
➢Logo or not
➢Instructions and Details
➢Insert link(s), picture(s), table, etc
➢Nice way to give instructions to a user who isn't in the form normally
➢Can even customize buttons for submission and viewing entries

Setting up an AGOL GeoForm

Select Form Fields   5. Fields

Here you can select which fields will be visible to your GeoForm audience, edit the Labels they will see, and add a short Description to help with data entry.

➢Can be configured numerous ways
➢Depends on the kind of data

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Setting up an AGOL GeoForm

➢Choose a Style / Theme
➢If you're feeling adventurous you can get an even more customized form
  ➢I have not done this

➢Make it so people can see a map of submissions collected with the GeoForm

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Setting up an AGOL GeoForm

This is a new option; very encouraging

Nice to have map open to current location

Setting up an AGOL GeoForm

➤Now you preview your form
➤See how it looks/flows
➤Able to go back to previous steps and change what you didn't like and preview again

Setting up an AGOL GeoForm

Save Application

If you are finished customizing your GeoForm, save the application and begin sharing with your audience. You can always return to this builder and continue customizing it based on feedback.

← Previous | Save and Exit | Save

➢ Once you've hit the 'Save and Exit' button you can still return to the design/configure steps if you want to make changes

Outfall Inspection Edits GeoForm
Web Mapping Application by greenwoodTom
Last Modified: March 30, 2016
(0 ratings, 14 views)
Facebook Twitter

OPEN ▾ | SHARE | EDIT | DELETE | MOVE ▾ | CHANGE OWNER | USAGE | ATTACH CODE | CONFIGURE APP | METADATA

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Finished AGOL GeoForm

Outfall Inspection Edits GeoForm

1. Enter Information

Facility Identifier

Inspect Date

Inspector

SubWatershed
- Driftwood
- Upper White

Submerged in Water
- No
- Partially
- Fully

Submerged with Sediment
- No
- Partially
- Fully

Flow Present
- Yes
- No

Flow Volume – Liter
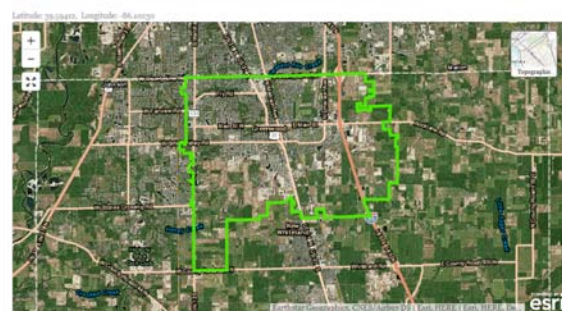
Liter

➢ Let's take a look at this form

2. Select Location

Specify the location for this entry by clicking/tapping the map or by using one of the following options.

Search | Lat/Lon

Find address or place 🔍 | Locate Me

Latitude: 39.52423, Longitude: -86.44032

esri

3. Complete Form

Add this information to the map.

Submit Inspection | View Inspections

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Finished AGOL GeoForm

➢This map is used to show all locations that you populated with the GeoForm
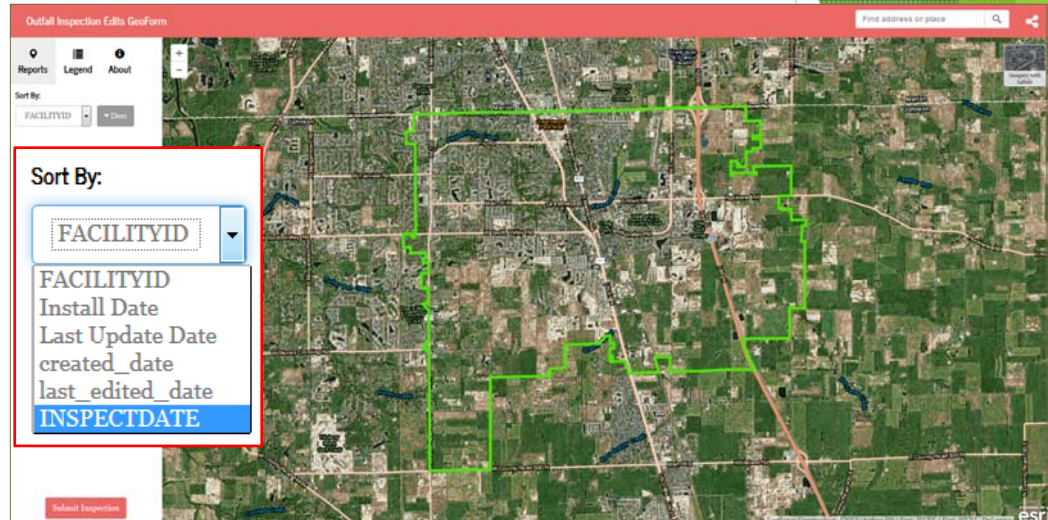
Microsoft OneDrive

➢OneDrive is free online storage (5GB) that comes with your Microsoft account

➢It's like an extra hard drive that's available from any of the devices you use

 ➢ The 2 statements above are straight from Microsoft website

➢Our IT Dept set us up with an account that is shared by CDS & Storm Depts

➢The storage capacity we have is 50 GB for $1.99/month
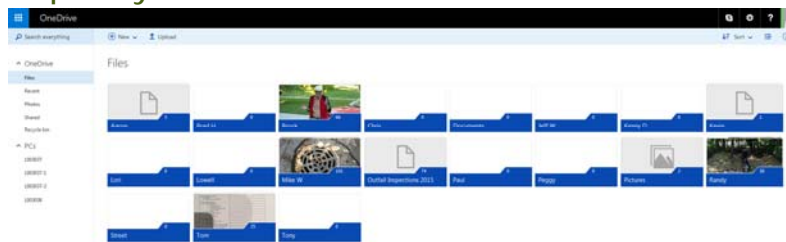
Microsoft OneDrive

Advantages to OneDrive
- Access your files from anywhere
  - Phone, laptop, tablet, desktop
- All participants have access to everyone's folders
- Able to share inspection results immediately to all interested parties
  - You can share folder(s) or documents with anyone, even people not on account
- Close collaboration with Office
  - Able to save Word, Excel, PowerPoint files directly into OneDrive

Disadvantages to OneDrive
- Privacy concerns
  - All participants have access to everyone's folders

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Outfall/IDDE Form

- Stormwater Dept found this form as a PDF
- Can view PDFs on an iPad but require advanced license to fill out
- You are able to fill out Word documents on an iPad
- Since OneDrive works so well with Word documents we decided to use that to our advantage
- I converted the PDF to Word

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IDDE Inspection

➢ First year our Stormwater Dept did any IDDE Inspections was last year
  ➢ Previous years were done by other depts
➢ Get notification through our help desk ticket system
➢ Inspectors used online Storm map to locate Outfalls and obtain info information for form
  ➢ ID, Watershed, Storm Network
  ➢ Would use GeoForm to add a point if Outfall had not been previously mapped
➢ Go to location and assess situation
➢ Open OneDrive open empty form
  ➢ Fill out form and add pictures
➢ Save filled out form in OneDrive
➢ This allows Superintendent to be notified immediately after assessment
  ➢ You can also send copy of report to involved party(s)
➢ If water sampling is required then the results can be added to the form at a later time

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IDDE Inspection

➢ This year we are doing things a little different
➢ I've created a map that will allow the inspectors to update Outfall directly
➢ Added all pertinent fields from inspection form into the layer
  ➢ Still can add pictures
➢ we can add a 'new' Outfall with this map

➢ Less steps to get inspection data tied to location
➢ Still able to easily produce reports/info about an inspection
➢ Still available to Superintendent as soon as asset is entered
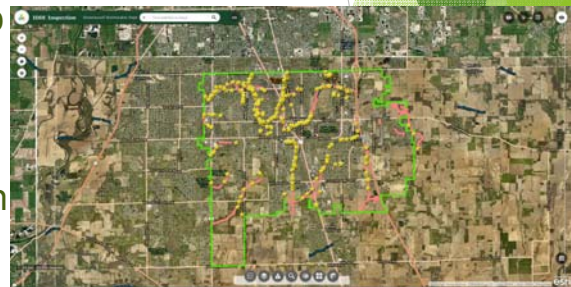
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Conclusions

Today we've discussed the following

➢ Setting up AGOL – uploading data and creating a map
➢ Creating a GeoForm
➢ Microsoft OneDrive
➢ IDDE Inspection process using all 3 tools above

➢All of these tools are either FREE or included with your Esri desktop package
➢Certainly not ideal to use 3 separate tools to perform inspection
➢When you have no or little money available then this works to show the decision makers what can work
➢Hopefully get them to find money to make the process run smoother

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QUESTIONS??

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http://www.cityofkokomo.org/007.JPG

http://www.ci.superior.wi.us/images/pages/N337/image009.jpg

http://townofsalina.org/content/Stormwater07/Home/:field-images/:content/images/image/9/medium.jpeg?

http://www.georgetowncountycleanwater.com/discharge/ulnaimages/discharge2.jpg

http://www.richmondgov.com/publicutilities/images/IDDE.jpg

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