

**ENVIRONMENTAL DATA  
AT YOUR FINGERTIPS,**

**HOW AN ARCGIS ONLINE  
SUBSCRIPTION IS USED TO MEET  
DEQ'S DATA SHARING NEEDS**

*Amy Brittain*

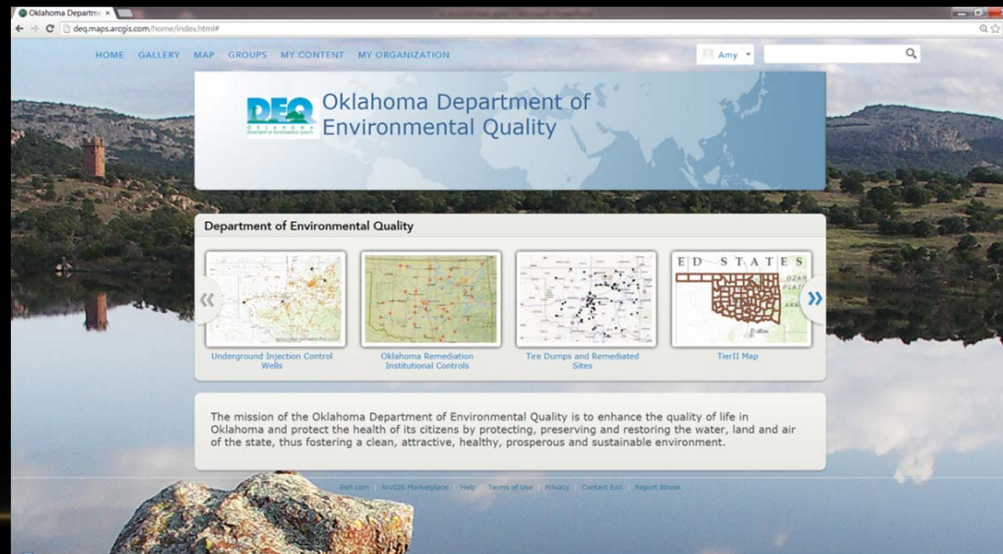
*Oklahoma Department of Environmental Quality*

*OKSCUAG*

*September 23, 2014*

# WHAT IS ARCGIS ONLINE?

- ArcGIS Online is a collaborative, cloud-based platform that allows members of an organization to use, create, and share maps, apps, and data, and access authoritative basemaps by Esri and its partners.



# WHY ARCGIS ONLINE?

- Needed an easy way to make web maps of important new data sets

Land Protection x IC Viewer x  
www.deq.state.ok.us/Ipnew/ICviewer.html

Oklahoma Department of Environmental Quality

air quality • water quality • land protection • state environmental laboratory services • environmental complaints & local services

Institutional Controls Web Viewer for Brownfields, VCP, SCAP, and Superfund

The DEQ has a mandatory recordable notice (deed notice) statute in its Environmental Quality Code (27A Oklahoma Statutes § 2-7-123). When a response action is taken at a Superfund site, or when a risk based cleanup action is taken at a remediation site, we are required by law to file a notice of remediation in the county land records. This map displays all Brownfields, Voluntary Cleanup, SCAP, and Superfund sites that have had institutional controls placed on the property and all sites that have been awarded a Brownfield Certificate through the DEQ's Brownfields Program.

By clicking on each site, a pop-up window will open which has links to the documents that outline the land use controls placed on the property and provide the full and complete legal description of the property. The legal descriptions should be used to identify the location and size of a site. Every precaution has been taken to ensure that the location is properly placed on the map; however, data errors may occur.

These pages last modified January 7, 2014

Details Legend Find address or place

100km  
60mi

esri

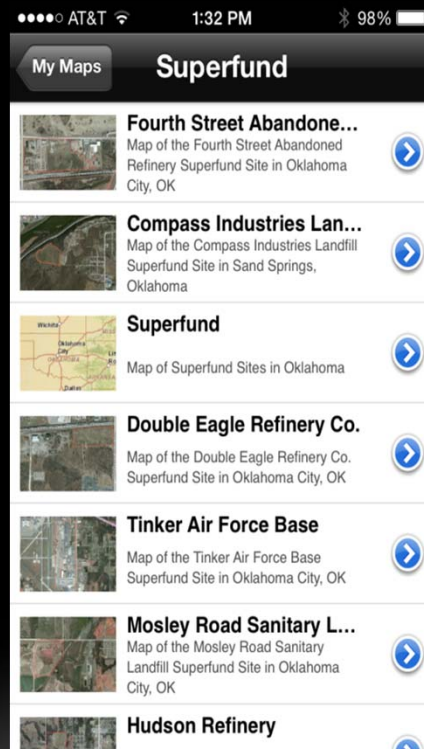
# ADVANTAGES

- Can quickly make web maps and apps
- Can do work without using IT development staff
- Can upload data layers from ArcGIS Server
- Can share maps inside organization only



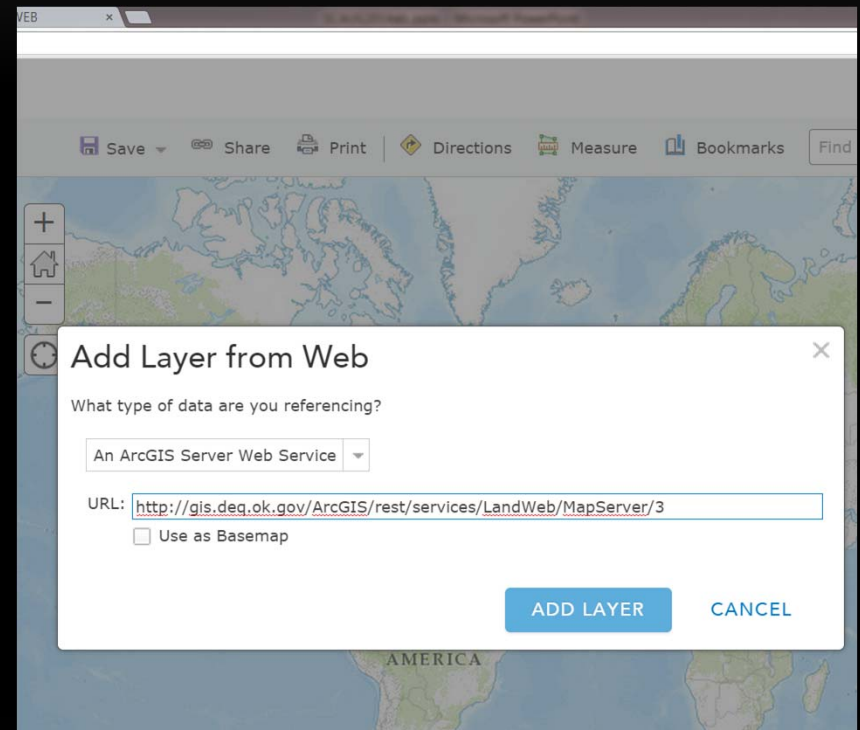
# ADVANTAGES

- Can see maps on iOS devices
- Can see maps in the field on mobile devices



# CHALLENGES FOR FULL IMPLEMENTATION

- ArcGIS Online updates can cause maps to stop working
- Adding/deleting data layers in ArcGIS Server can cause problems with maps
- Finding/training new users in each Division/Program



# SET UP PROCESS

- Started with individual licenses in 2011
- ESRI online classes
- Audited website for places where imbedded maps could be used

Oklahoma Department of Environmental Quality

HAZARDOUS WASTE PERMITTING AND CORRECTIVE ACTION SECTION

Vance AFB

Street: 140 Channel Street, Building: 208  
Address: 208  
City: Vance AFB  
County: Garfield  
Zip: 73306  
Web Location: Maps, Info

HAZARDOUS WASTE PERMITTING AND CORRECTIVE ACTION SECTION

Eng. Manager (405) 702-5100

The Hazardous Waste Permitting and Corrective Action Section is composed of engineers, hydrologists, and geologists who review permit applications and write permits for hazardous waste treatment, storage, and disposal facilities as authorized under the Federal Resource Conservation and Recovery Act, EPA regulations, the Oklahoma Hazardous Waste Management Act, and state rules. These sites include hazardous waste landfill disposal sites, facilities that store hazardous wastes, hazardous waste transfer facilities, and certain types of reclamation facilities. The Section also oversees RCRA Corrective Action at various sites across Oklahoma.

LAND

MOSLEY ROAD SANITARY LANDFILL SUPERFUND SITE

Page Last Updated August 25, 2014

City: Oklahoma City  
County: Oklahoma  
Site Type: Municipal Landfill  
Area: 0.113 square miles / 72 acres  
Township and Range: Section 21, Township 12 North, Range 2 West  
Latitude: 35.50675444  
Longitude: -97.41431367  
National Priorities List: Final Listing Date - Feb. 21, 1990; Deletion Date - Sept. 26, 2013  
Cleanup Oversight Agencies: Waste Management of Oklahoma (WMO), DEQ and EPA  
Lead Agency: EPA  
Office: DEQ, Land Protection Division, (405)702-5100  
DEQ Site Project Manager: Amber Brandy, (405) 702-5133  
DEQ Press Contact: Skylar McElhenny, (405)702-7167  
Current Status: Cleanup completed Deleted from National Priorities List Sept. 26, 2013

Mosley Road Superfund Site - Oklahoma County, Oklahoma  
2008

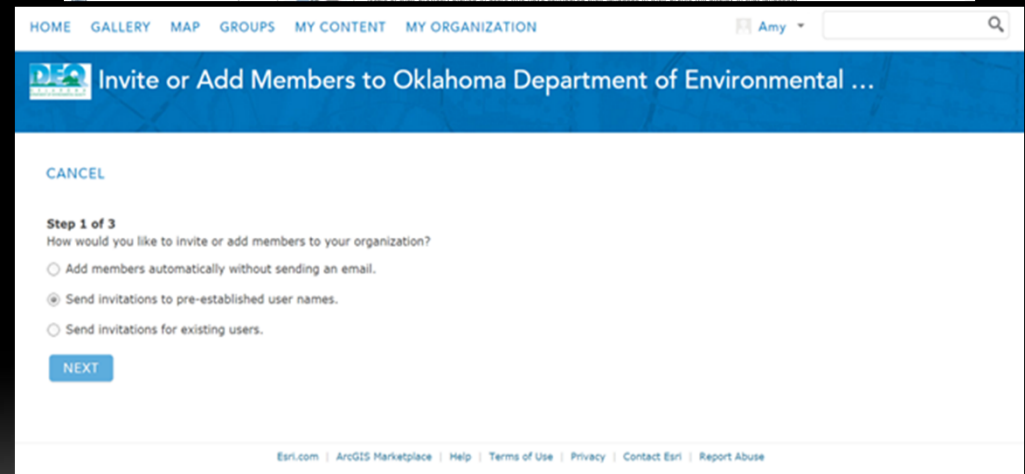
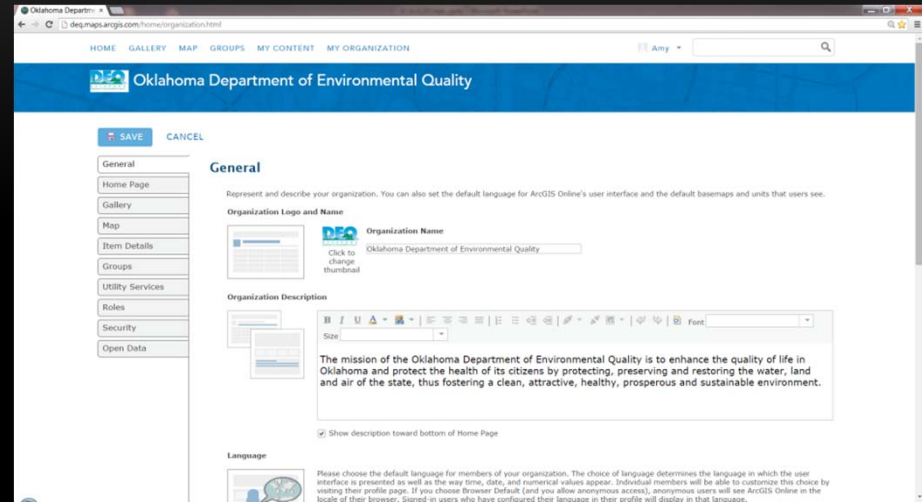
Details Legend

Find address or place

esri

# SET UP PROCESS

- April 2013, DEQ purchased an organizational subscription
- Set up DEQ homepage
- Invited users
- Set up Groups
- Tested out the available features!





# ORGANIZATION

Oklahoma Department of Environmental Quality

HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION

Amy

[EDIT SETTINGS](#) [INVITE MEMBERS](#) [VIEW STATUS](#) [VIEW SYSTEM HEALTH](#)

### Members

Viewing: Current Members

| Name            | Username            | Last Login   | Role          | Action |
|-----------------|---------------------|--------------|---------------|--------|
| Amy Brittain    | abrittain57         | Sep 4, 2014  | Administrator |        |
| Brooke Holleman | Brooke.Holleman_DEQ | Jun 26, 2014 | Publisher     |        |
| Chris Monk      | chris.monk_DEQ      | Not yet      | Publisher     |        |
| Ferrella March  | Ferrella.March_DEQ  | Aug 13, 2014 | User          |        |
| Heather House   | Heather.House_DEQ   | Sep 4, 2014  | Publisher     |        |
| Heather Mallory | brownfields_DEQ     | Not yet      | Publisher     |        |
| Jaret Martin    | Jaret.Martin_DEQ    | Aug 22, 2014 | User          |        |
| Joe Long        | Joe.Long_DEQ6       | Sep 3, 2014  | Publisher     |        |
| Matthew Johnson | Matthew.Johnson_DEQ | Aug 29, 2014 | Publisher     |        |
| Matthew Wormus  | matthew.wormus_DEQ  | Sep 4, 2014  | Publisher     |        |

Page 1 of 2  Viewing 1 - 10 of 14

### Subscription Status

7,580 credits remaining  
Expires: 7/1/15 [RENEW](#)  
ID: 4827634942

### Find...

- The most viewed items in the organization
- The last items added to the organization
- The items added to the organization that are public
- The organization's groups
- The organization's groups that are public
- The organization's registered apps

### Featured Groups

- National Maps for USA
- Esri Maps and Data
- Community Basemaps
- Landsat Community
- Web Application Templates

# GROUPS

The screenshot shows the ArcGIS Groups web application interface. At the top, there is a navigation bar with links for HOME, GALLERY, MAP, GROUPS, MY CONTENT, and MY ORGANIZATION. A search bar is located on the right side of the navigation bar, with the name 'Amy' and a search icon. Below the navigation bar is a blue header with the text 'My Groups' and a 'CREATE A GROUP' button. The main content area is divided into three columns. The left column is titled 'Show' and contains a list of filters: 'All My Groups', 'Owned by Me', 'Owned by Others', and 'With New Membership Requests'. The middle column is titled 'You are a member of 4 groups' and lists four groups, each with a thumbnail image, a title, a description, and a 'Details' link. The right column is titled 'Find...' and contains a search bar and a list of featured groups. At the bottom of the page, there is a footer with links to Esri.com, ArcGIS Marketplace, Help, Terms of Use, Privacy, Contact Esri, and Report Abuse.

Groups

deq.maps.arcgis.com/home/groups.html

HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION

Amy

## My Groups

CREATE A GROUP

Show

**All My Groups**  
Owned by Me  
Owned by Others  
With New Membership Requests

You are a member of 4 groups

**Department of Environmental Quality**  
created by Brooke.Holleman\_DEQ on November 22, 2013  
Details

**DEQ\_WEB**  
created by matthew.wormus\_DEQ on March 12, 2014  
Details

**ECLS**  
Within this group we can test the Collector App for ArcGIS on mobile devices with ECLS data.  
created by Heather.House\_DEQ on August 20, 2014  
Details

**Land Protection**  
Oklahoma Department of Environmental Quality Land Protection Division  
created by abrittain57 on June 21, 2013  
Details

Find...

The organization's groups

The organization's groups that are public

**Featured Groups**

National Maps for USA

Esri Maps and Data

Community Basemaps

Landsat Community

Web Application Templates

ArcGIS for Local Government

Esri.com | ArcGIS Marketplace | Help | Terms of Use | Privacy | Contact Esri | Report Abuse

# GROUPS

Land Protection x

deq.maps.arcgis.com/home/group.html?owner=abrittain57&title=Land%20Protection&focus=applications

HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION Amy









## Land Protection

EDIT INVITE USERS MEMBERSHIP REQUESTS CHANGE OWNER DELETE GROUP SHARE

Oklahoma Department of Environmental Quality Land Protection Division

Facebook Twitter

### Group Content

|   | Title   | Owner | Rating | Views | Date |
|---|---|-------|--------|-------|------|
| <a href="#">All Results</a><br><a href="#">Maps</a><br><a href="#">Layers</a><br><b><a href="#">Apps</a></b><br><a href="#">Tools</a><br><a href="#">Files</a><br><br><b><a href="#">All Applications</a></b><br><a href="#">Web Applications</a><br><a href="#">Mobile Applications</a><br><a href="#">Desktop Applications</a><br><input checked="" type="checkbox"/> Show ArcGIS Desktop Content |  Land Protection Data Layers   |       |        |       |      |
|   | These are data layers for the Land Protection division of DEQ. More information can be found at <a href="http://gis.deq.ok.gov/flexviewer/">http://gis.deq.ok.gov/flexviewer/</a> |       |        |       |      |
|   |  Web Mapping Application by abrittain57  |       |        |       |      |
|   | Last Modified: October 10, 2013   |       |        |       |      |
|   | ★★★★★ (0 ratings, 0 comments, 188 views)  |       |        |       |      |
|   |  TierII Application   |       |        |       |      |
|   | Map of Oklahoma TierII facilities   |       |        |       |      |
|   |  Web Mapping Application by abrittain57  |       |        |       |      |
|   | Last Modified: January 14, 2014   |       |        |       |      |
|   | ★★★★★ (0 ratings, 0 comments, 186 views)  |       |        |       |      |
|   |  Land Protection Viewer  |       |        |       |      |
|   | Data layers from the Land Protection Division of the Oklahoma Department of Environmental Quality   |       |        |       |      |
|   |  Web Mapping Application by abrittain57  |       |        |       |      |
|   | Last Modified: October 17, 2013   |       |        |       |      |
|   | ★★★★★ (0 ratings, 0 comments, 123 views)  |       |        |       |      |
|   |  Remediation Institutional Controls  |       |        |       |      |
|   | Locations of Remediation Sites with Institutional Controls in Oklahoma  |       |        |       |      |
|   |  Web Mapping Application by abrittain57  |       |        |       |      |
|   | Last Modified: June 26, 2013  |       |        |       |      |

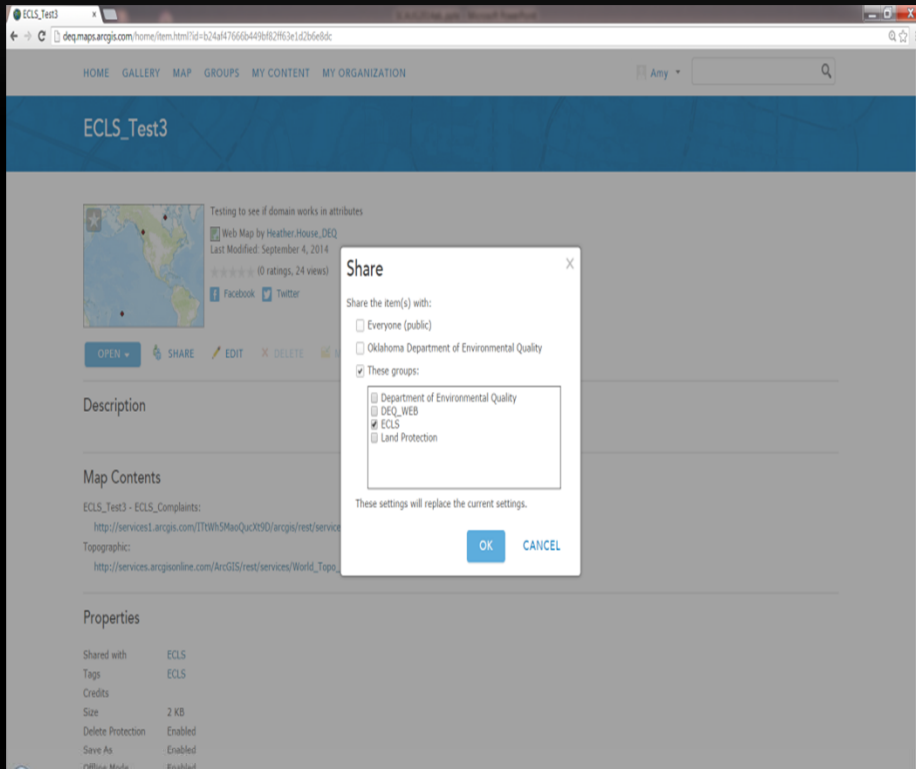
### Group Details

abrittain57  
Status: public  
Contributors: All members  
Tags:  
Environmental, Land protection

### 5 Members

abrittain57  
Brooke.Holleman\_DEQ  
brownfields\_DEQ  
Heather.House\_DEQ  
matthew.wormus\_DEQ

# SHARING



- Can share maps/apps with everyone or just one of your groups
- Must be shared with everyone if on public web site as a map or web app
- For use in GPS Collector app share through Groups

# MY CONTENT ORGANIZATION

deq.maps.arcgis.com/home/content.html

HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION Amy

## My Content

**Folders**

- NEW DELETE
- abrittain57 (Home)
- Applications
- Data
- Maps
- Superfund

**Show**

- All
- Maps
- Layers
- Apps
- Tools
- Files

[+ Add Item](#) [Create Map](#) [Create Layer](#) [Share](#) [Delete](#) [Move](#) [Change Owner](#)

| Title                              | Type                    | Modified     | Shared   |
|------------------------------------|-------------------------|--------------|----------|
| DEQ Map Gallery                    | Web Mapping Application | Mar 11, 2014 | Everyone |
| Land Protection Data Layers        | Web Mapping Application | Oct 10, 2013 | Everyone |
| Land Protection Viewer             | Web Mapping Application | Oct 17, 2013 | Everyone |
| Remediation Institutional Controls | Web Mapping Application | Jun 26, 2013 | Group    |
| TierII Application                 | Web Mapping Application | Jan 14, 2014 | Everyone |

# WEB APPLICATIONS

## DEQ Map Gallery

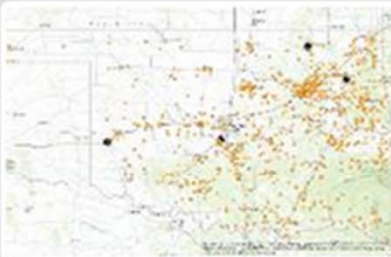
Search maps



### Superfund Sites

Web Map by abrittain57. Last Modified Aug 25, 2014.

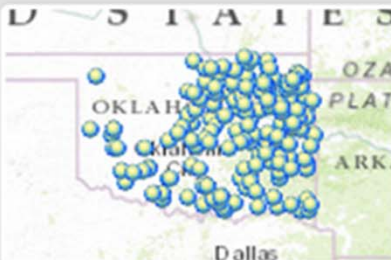
Map of Superfund Sites in Oklahoma



### Underground Injection Control Wells

Web Map by matthew.wormus\_DEQ. Last Modified Aug 18, 2014.

A map of the underground injection control (UIC) wells regulated by the Oklahoma Department of Environmental Quality



### PWS Surface Water Intakes

Web Map by matthew.wormus\_DEQ. Last Modified Jun 11, 2014.

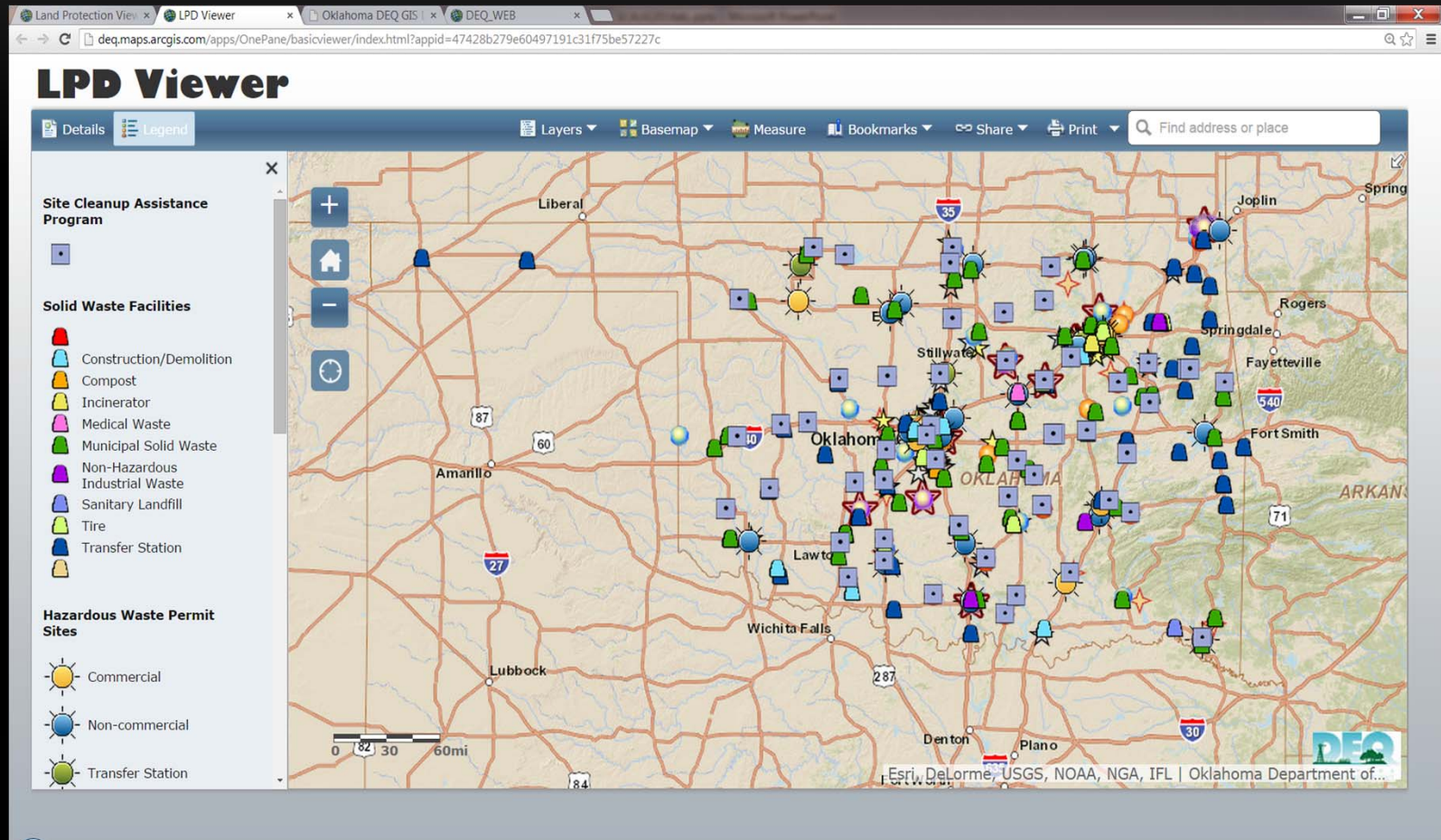
Locations of the Public Water Systems (PWS) Surface Water Intakes

# WEB APPLICATIONS

The screenshot displays a web browser window with the following elements:

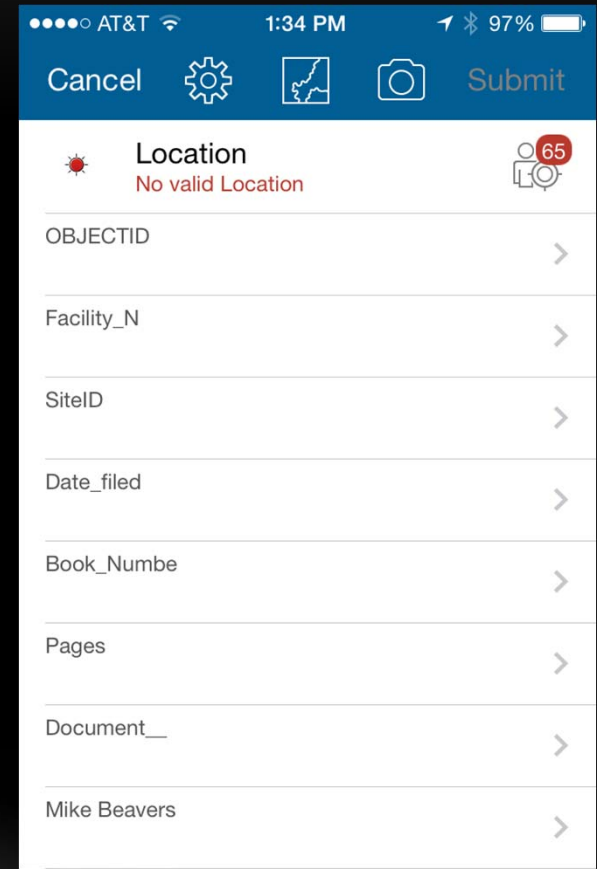
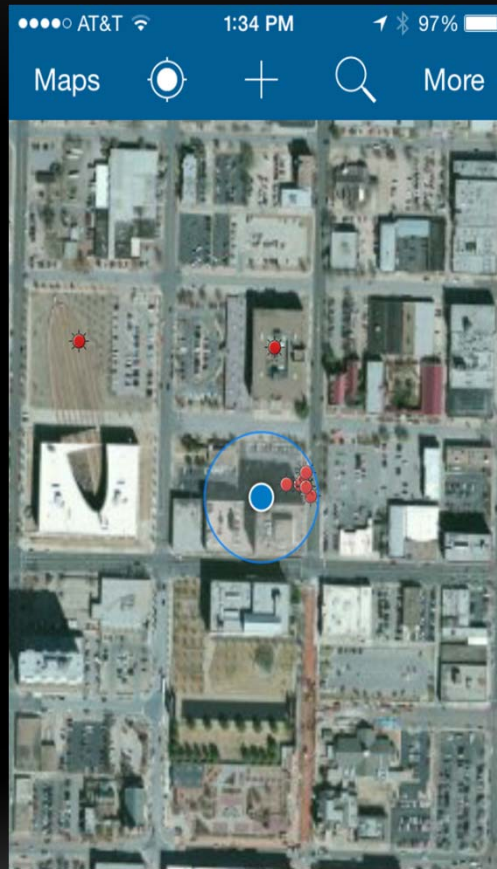
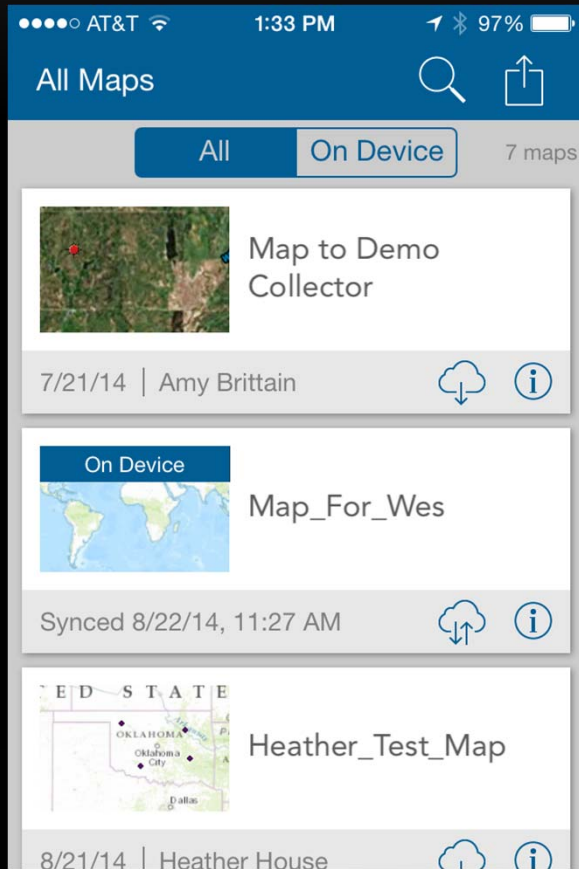
- Browser Tabs:** Department of Environ..., TierII Facility Viewer, Oklahoma DEQ GIS, DEQ\_WEB.
- Address Bar:** deq.maps.arcgis.com/apps/Solutions/s2.html?appid=d7b51840006545b4a49d58a7424f63a4
- Page Title:** TierII Facility Viewer
- Map Area:** A map of Oklahoma showing county boundaries and major cities. A brown outline highlights a specific region in the central and eastern parts of the state. Major geographical features like the "ADG (STAKED PLAIN)", "OZARK PLATEAU", and "Ouchita Mountains" are labeled.
- Search Panel:** Located on the right side, it contains a search bar with the text "Conoco" and a list of search results:
  - ConocoPhillips—A Cross Ranch 10-12
  - ConocoPhillips—A Cross Ranch 9-12
  - ConocoPhillips—A Cross Ranch 4-12
  - ConocoPhillips—A
- Navigation Controls:** On the left side of the map, there are buttons for zooming in (+), zooming out (-), home, and refresh.
- Footer:** At the bottom right, it lists data sources: Esri, DeLorme, FAO, USGS, NOAA, EPA, NPS, and the Esri logo.

# WEB APPLICATIONS



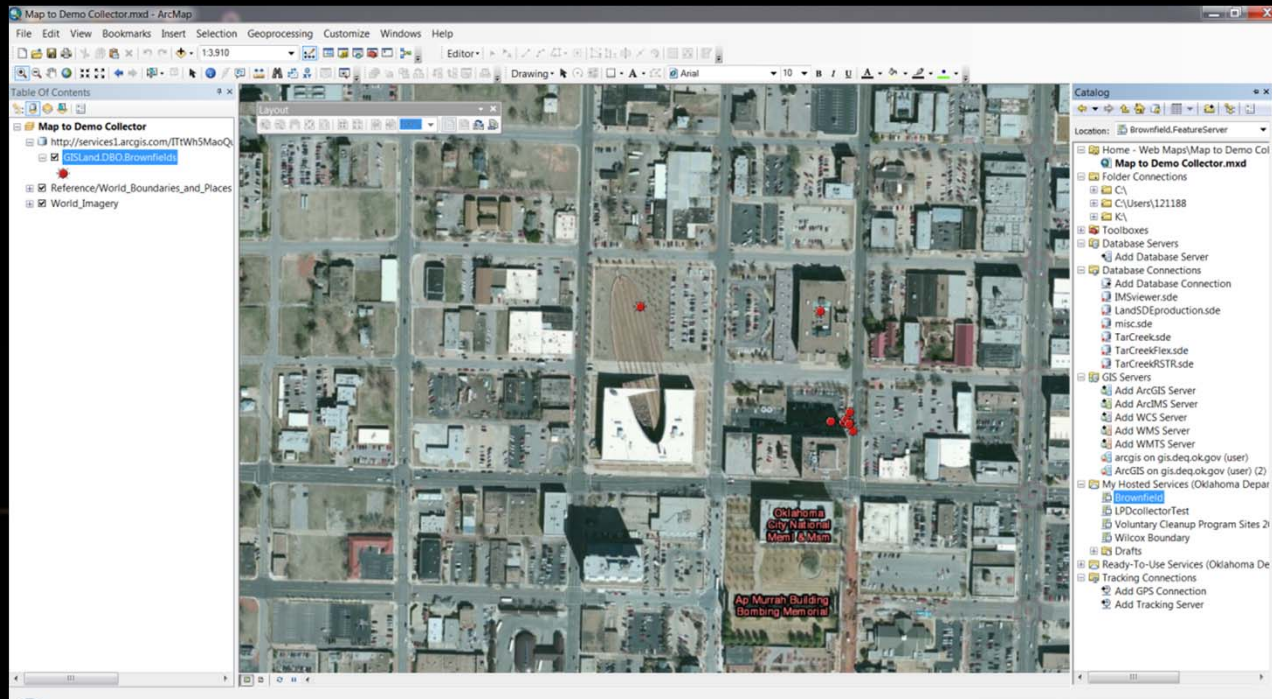


# COLLECTOR GPS MOBILE APP



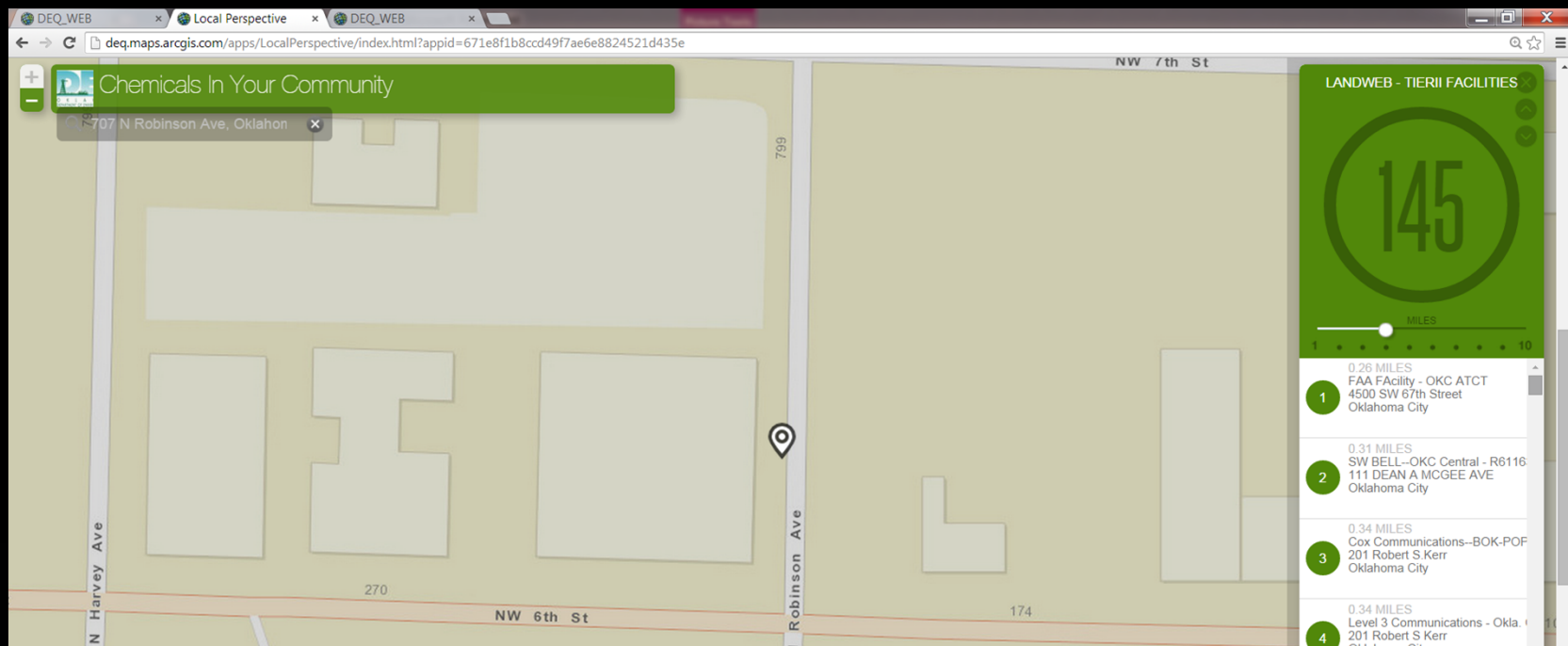
# COLLECTOR GPS MOBILE APP

- Works on Android and iPhone devices
- Allow edits to layers before uploading in ArcGIS Online
- Share maps with your internal Group
- Can attach photos to points



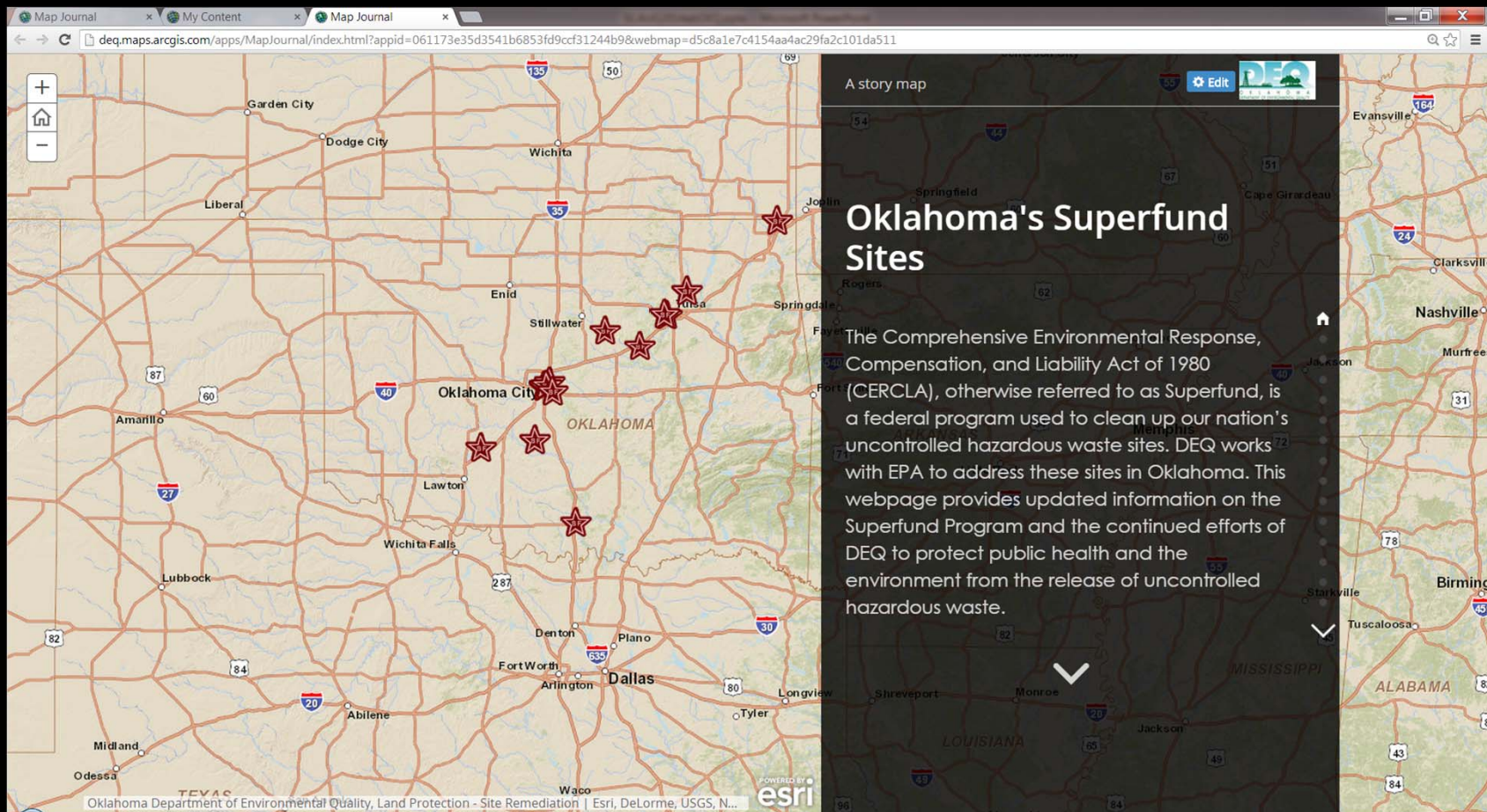
# FUTURE PROJECTS

- More customized web applications!



# FUTURE PROJECTS

- Story maps



# DEQ.MAPS.ARCGIS.COM/HOME/INDEX.HTML

The screenshot shows a web browser window displaying the homepage of the Oklahoma Department of Environmental Quality's ArcGIS Maps application. The browser's address bar shows the URL `deq.maps.arcgis.com/home/index.html#`. The page features a navigation menu with links for HOME, GALLERY, MAP, GROUPS, MY CONTENT, and MY ORGANIZATION. A search bar is located in the top right corner, with the name 'Amy' entered. The main header area contains the DEQ logo and the text 'Oklahoma Department of Environmental Quality'. Below this, a section titled 'Department of Environmental Quality' displays four map thumbnails: 'Underground Injection Control Wells', 'Oklahoma Remediation Institutional Controls', 'Tire Dumps and Remediated Sites', and 'TierII Map'. A mission statement is provided in a text box below the maps. The footer includes links to Esri.com, ArcGIS Marketplace, Help, Terms of Use, Privacy, Contact Esri, and Report Abuse.

Oklahoma Department of Environmental Quality

Department of Environmental Quality

- Underground Injection Control Wells
- Oklahoma Remediation Institutional Controls
- Tire Dumps and Remediated Sites
- TierII Map

The mission of the Oklahoma Department of Environmental Quality is to enhance the quality of life in Oklahoma and protect the health of its citizens by protecting, preserving and restoring the water, land and air of the state, thus fostering a clean, attractive, healthy, prosperous and sustainable environment.

Esri.com | ArcGIS Marketplace | Help | Terms of Use | Privacy | Contact Esri | Report Abuse

# QUESTIONS?

Amy Brittain

Environmental Programs Manager

Site Remediation Section

Land Protection Division

Oklahoma Department of Environmental Quality

405-702-5157

[Amy.Brittain@deq.ok.gov](mailto:Amy.Brittain@deq.ok.gov)