

# HydroAdd Workflow

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The Hydrography Addressing Tool (HydroAdd) is a website built by the USGS National Geospatial Program (NGP). It is a platform which allows users to address (make coincident, or reference) their own data to the National Hydrography Dataset (NHD). Users must make their geospatial data available as a web feature service, either from their own server hardware or from a third-party service such as Esri ArcGIS Online (AGOL). The owner of the service layer grants editing permission to other users at the level of the service layer. For example, AGOL allows the owner of the service layer to grant editing permissions to specific users. HydroAdd honors the editing permissions set by the owner of the service layer. HydroAdd then 'consumes' the service from AGOL and displays it in the browser for editing, along with a read-only NHD layer. In this way, a team of users with editing permission can work on common projects with HydroAdd.

In summary, HydroAdd allows permitted users to update attributes and to edit the geometry of features in a service layer to be coincident with NHD features. **Users cannot edit the NHD or any other USGS data. The NHD is only a reference layer for display in HydroAdd.**

Users will be Federal employees, such as USGS or other DOI employees; or members of the public, such as state, academic, or other users with knowledge of GIS and knowledge of how to create a web feature service.

USGS HydroAdd Administrators are a limited group of the USGS NHD Partner Support Team. HydroAdd Administrators must be able to contact users directly in case there are issues with the functioning of HydroAdd that could affect the users' editing work, issues with their user role assignments, problems with their data, or other issues with HydroAdd.

# Login

1. Users log in with an existing DOI or Esri ArcGIS Online account.

The screenshot displays the top navigation bar of the USGS Hydro Address Tool. On the left, there is a search bar with a magnifying glass icon and the text "Search/Select". Below the search bar is a "LOGIN" button. On the right side of the navigation bar, there are two buttons: "DOI" (dark blue) and "ARCGIS" (dark grey). Below the navigation bar, a Microsoft account selection popup is visible. The popup has a white background and contains the Microsoft logo and the text "Pick an account". Below this, there is a list of accounts. The first account is "mdtinker@usgs.gov" with a small profile icon and a vertical ellipsis to its right. Below the list is a button with a plus sign and the text "Use another account".

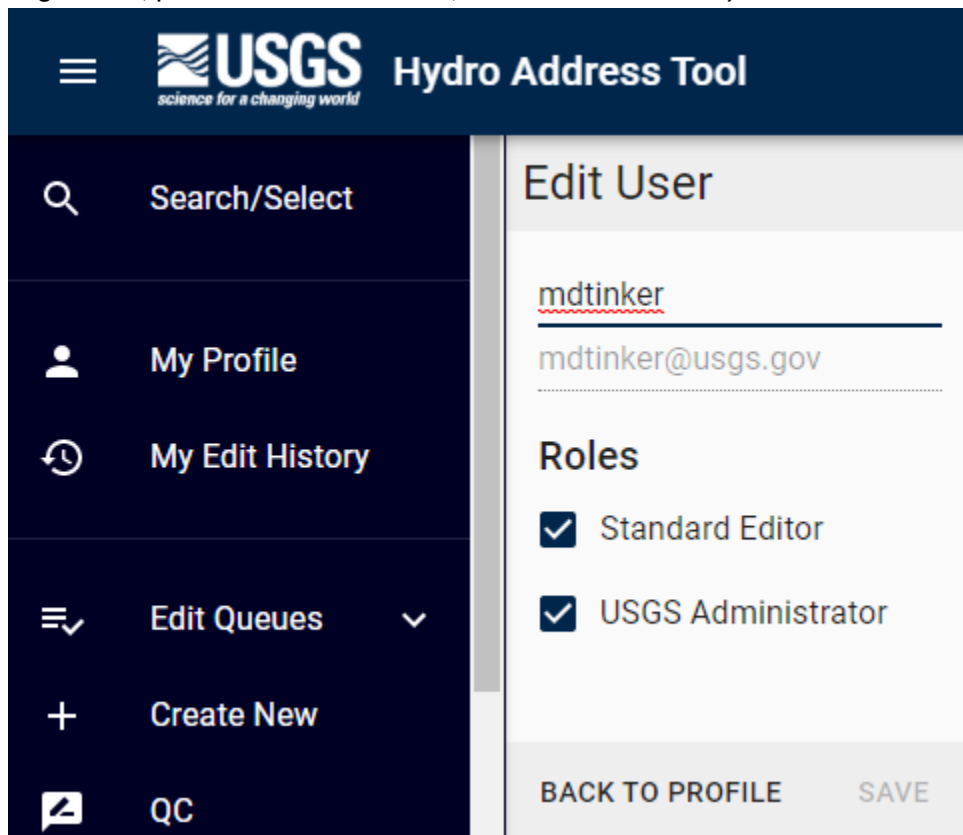
2. If a user has added a web feature service from Esri Arc GIS Online (AGOL), HydroAdd prompts the user for one additional authorization for Esri login credentials.

The screenshot displays the Esri login interface. At the top left, it says "Sign in with" and the Esri logo is on the top right. Below this, there are two main login sections. The first is "ArcGIS login", which includes a username field containing "mdtinker\_usgs", a password field with masked characters, a "Keep me signed in" checkbox, a blue "Sign In" button, and links for "Forgot username?" and "Forgot password?". The second section is "Enterprise login", which features three social login options: GitHub, Facebook, and Google. At the bottom of the Enterprise login section, there is a link for "No account? Create an account" and a "Privacy" link in the bottom right corner.

## User Profile

After login, users have the option to add a username to their user profile, but this is not required. Recommendation to users is to use a simple username, or nickname, but not full names.

- Standard Editors can view their own profile, but not the profiles of other users.
- Standard Editors can view the edits that have occurred in their service layer by other users but cannot determine which users performed the edits.
- USGS HydroAdd Administrators can view the profiles of all users.
- USGS HydroAdd Administrators can also view editing activity of all users, by username and email.
- USGS HydroAdd Administrators are a limited group of the USGS NHD Partner Support Team . HydroAdd Administrators must be able to contact users directly in case there are issues with the functioning of HydroAdd that could affect the users' editing work, issues with their user role assignments, problems with their data, or other issues with HydroAdd.



## Workflow for creating or updating the web service layer with HydroAdd

HydroAdd allows users to address their own data to the NHD. HydroAdd displays the user's web feature service from AGOL, along with the NHD. Users update their own data with HydroAdd to make their data coincident to the NHD features. Users can only edit their own data as it exists in their own web feature service. Users cannot edit the NHD; it is only a reference layer for display in the HydroAdd.

## Add a service layer from ArcGIS Online

1. User adds a service layer from AGOL

### Add a New Service

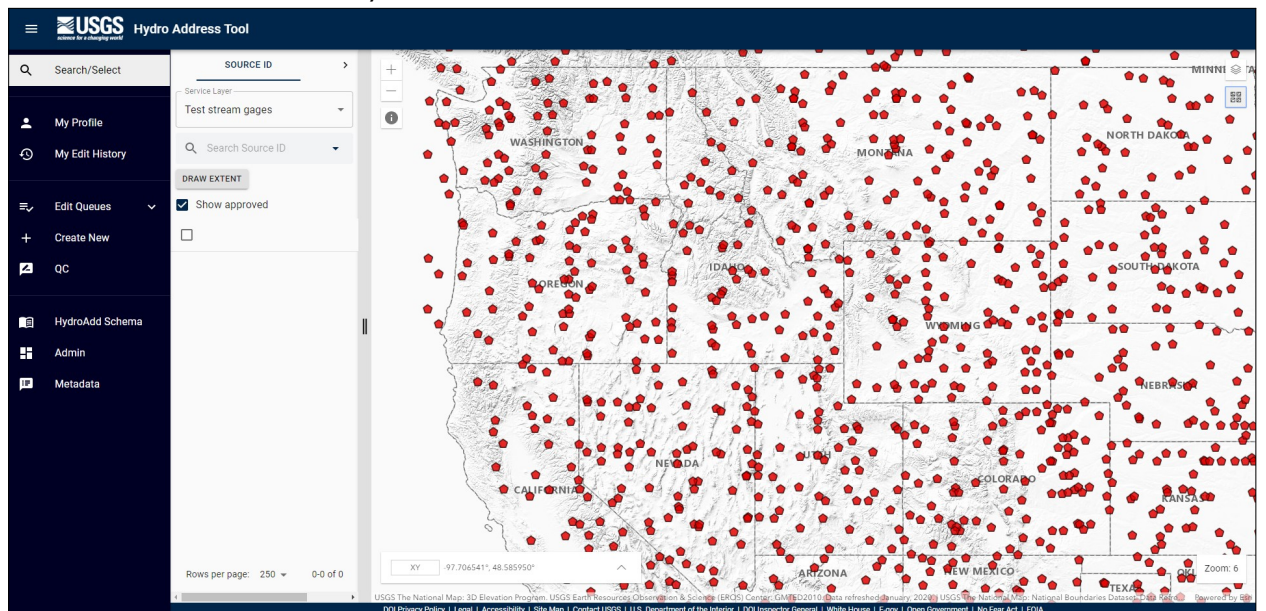
Nickname \*  
Test stream gages

Service URL \*  
https://services.arcgis.com/v01gqwM5QqNysAAi/arcgis/rest/services/

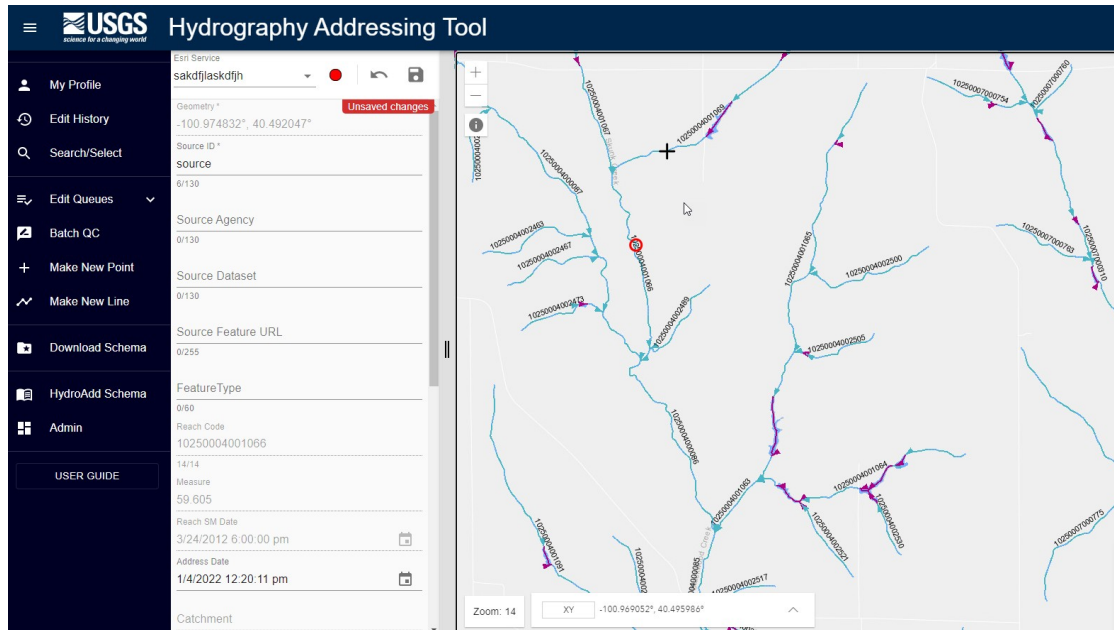
Visible

CANCEL SUBMIT

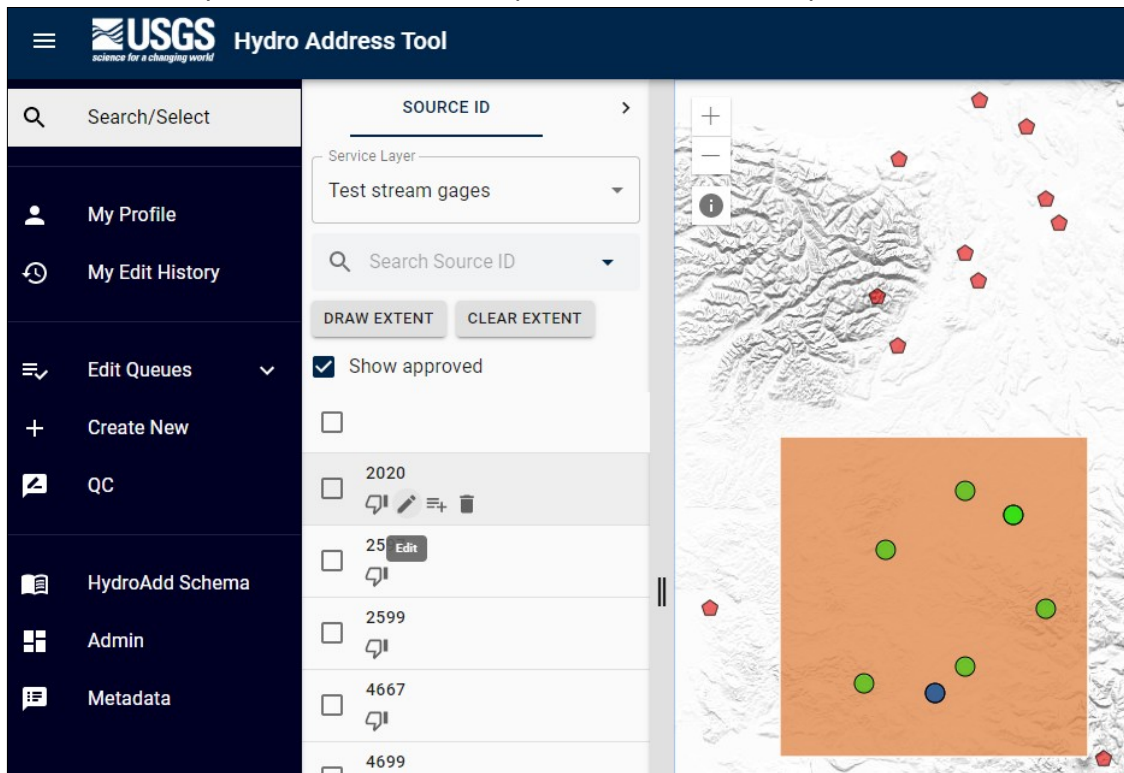
2. User's data becomes visible in HydroAdd.



3. User can create new points in their data.

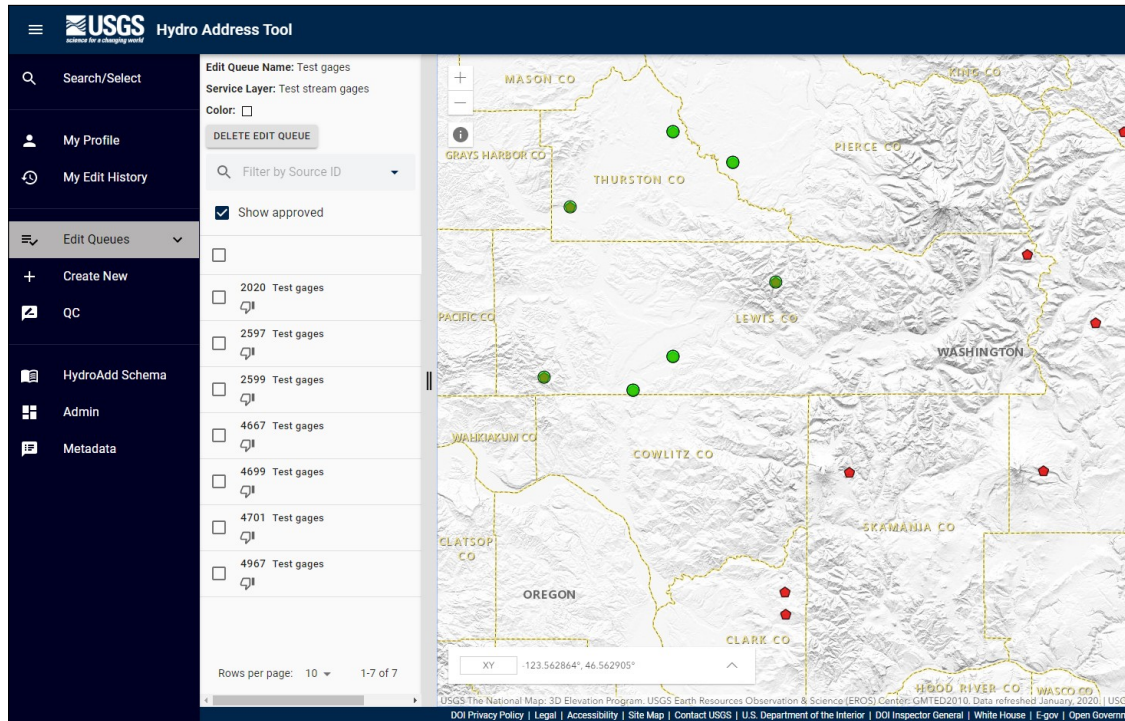


4. Users can select points from their data they wish to add to an edit queue.

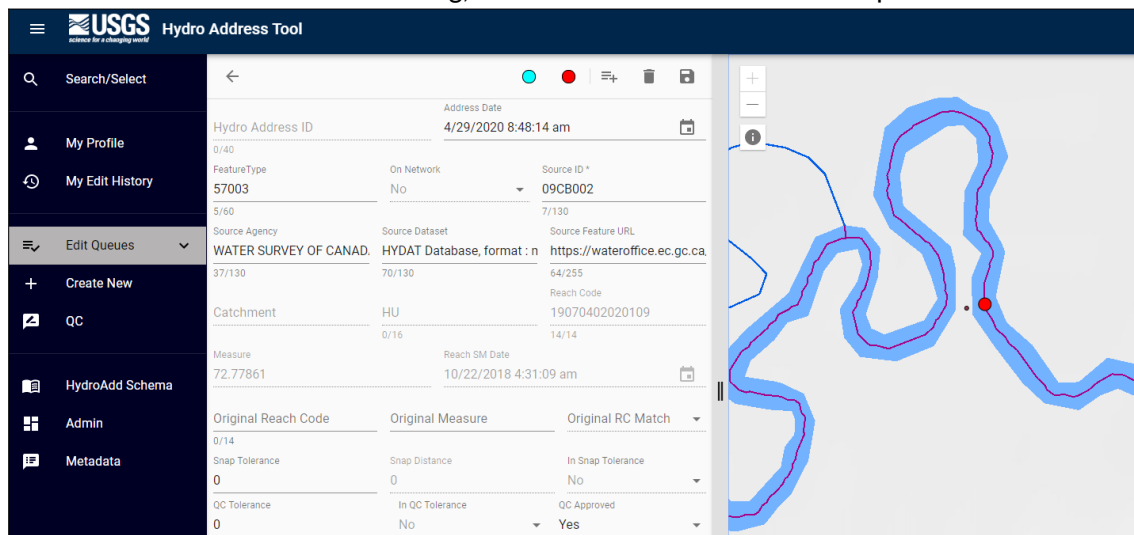


## Edit Service Layer

1. Users then edit the items in the queue.  
Users click a row in the queue to zoom to the feature.  
This screenshot shows the editing queue.



2. This screen shows the user editing, zoomed into their data from the queue.



- When the user is done editing their data with HydroAdd, they can retrieve their data from AGOL.

The screenshot displays the ArcGIS Online interface for the item 'HydroAddQC2'. The browser address bar shows the URL: [usgs.maps.arcgis.com/home/item.html?id=26e54e6a513345b954141add79b648f](https://usgs.maps.arcgis.com/home/item.html?id=26e54e6a513345b954141add79b648f). The page title is 'HydroAddQC2'. The main content area includes a thumbnail, a description, and a list of layers. The right-hand navigation pane contains several buttons, with 'Export Data' highlighted by a red box. The 'Export Data' button is located in the right-hand navigation pane, below the 'Create View Layer' button and above the 'Update Data' button.

HydroAdd service layers, random points for testing HydroAdd data  
Feature Layer (hosted) by mdtinker\_USGS  
Created: Mar 22, 2020 Updated: Mar 23, 2020 View Count: 30

Description  
Add an in-depth description of the item.

Layers

- HydroAddressPointswithQC2500RandomV10  
Open In Export To Time Settings Enable Attachments Service URL Metadata
- HydroAddressPoints5000RandomV9  
Open In Export To Time Settings Enable Attachments Service URL Metadata

Terms of Use  
Add any special restrictions, disclaimers, terms and conditions, or limitations on using the item's content.

Comments (0)  
Leave a comment.

Export Data

Item Information  
Low High  
Top Improvement: Add a longer summary

Details  
Source: Feature Service  
Created from: HydroAddQC2, Service Definition  
Data Last Updated: Apr 3, 2020, 12:37:11 PM  
Size: 2 MB  
★★★★★

# Administrator Functions

USGS Administrators of HydroAdd can view all user profiles in the Admin panel, including username, user email, and their associated service layers.

The screenshot shows the USGS Hydro Address Tool Admin panel. The top navigation bar includes the USGS logo and the title 'Hydro Address Tool'. Below the navigation bar, there are four summary cards: '10 Total Users', '35 Feature Additions', '615 Feature Edits', and '11 Feature Deletions'. The main content area is divided into two sections. The top section is a table of feature modifications, and the bottom section is a table of user profiles.

Feature Modification	Date	Source ID	User	Service Url
	03-03-2020	13270800	Alex	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0</a>
	03-03-2020	13270800	Alex	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0</a>
	03-03-2020	13270800	Alex	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0</a>
	03-03-2020	13289500	Alex	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAdd_data/FeatureServer/0</a>
	03-03-2020	12334510	mdtinker_gmail	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/0</a>
	03-03-2020	12340000	mdtinker_gmail	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/0</a>
	03-04-2020	12334000	mdtinker	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/0">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/0</a>
	03-04-2020	1000562	mdtinker	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/3">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/3</a>
	03-04-2020	1000562	mdtinker	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/3">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/3</a>
	03-05-2020	4700992	mdtinker	<a href="https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/3">https://services.arcgis.com/v01gwwM50gNysAAI/arcgis/rest/services/HydroAddDC/FeatureServer/3</a>

User Display Name	Contact Email	Created At	Last Login Time
mdtinker_gmail	mdtinker@gmail.com	03-03-2020	04-30-2020
michaeltinker	michaeltinker@outlook.com	03-24-2020	03-26-2020
mdtinker	mdtinker@usgs.gov	03-04-2020	04-30-2020
joe-gov	jpantoga@usgs.gov	03-03-2020	04-23-2020

Administrators can also search for users by username.

The screenshot shows the USGS Hydro Address Tool Admin panel with the 'USERS' tab selected. A search bar is visible with the text 'Search users'. Below the search bar, a table lists the users found.

Display name	Created
mdtinker_gmail	Tue, Mar 3, 2020 1:40 PM
michaeltinker	Tue, Mar 24, 2020 3:18 PM
mdtinker	Wed, Mar 4, 2020 8:23 AM
joe-gov	Tue, Mar 3, 2020 8:25 AM