# Searching Unpublished Web Services with HydroDesktop

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- **Exercise Procedure**

***IMPORTANT** HydroDesktop version 1.4.3 Beta Test Release was used in the making of this tutorial. At the time of this writing, it is still in the beta stages of software development and thus still contains bugs. We are working hard to fix these bugs, but you may want to closely and carefully follow the exercise procedure in the mean time in order to minimize bugs encountered.

1. Open HydroDesktop and select the 'Create New Project From Template' radio button. Make sure **North America** is highlighted in the selection box below and click **OK** to continue. This will bring you to the home screen, which displays a map of North America and the map, search, table, graph tabs on the top.
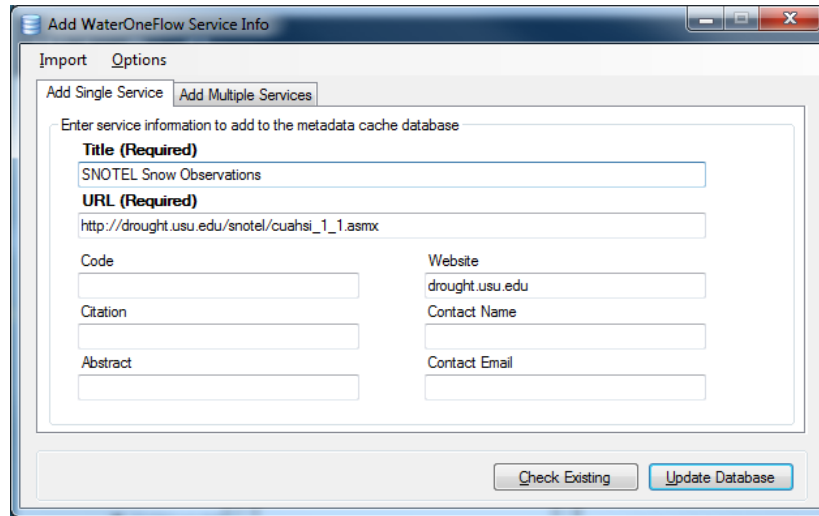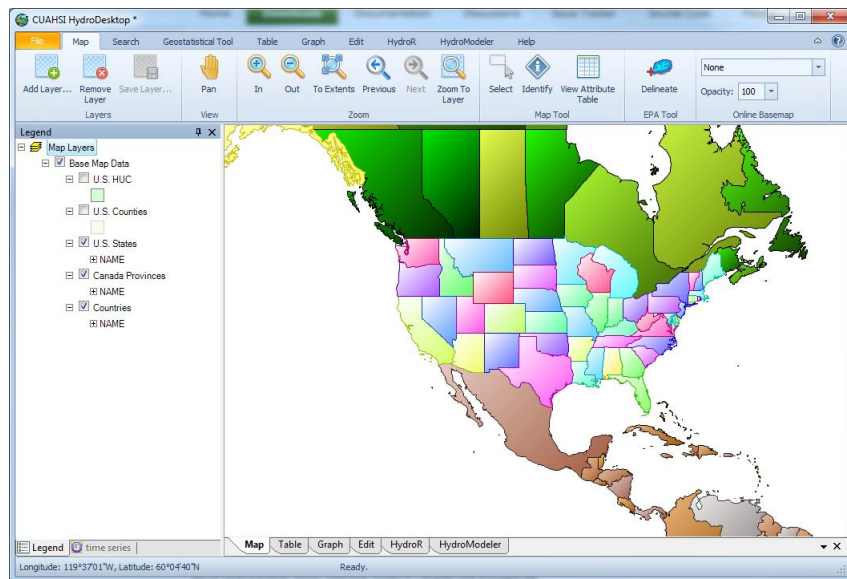

2. In the tool ribbon in the top left corner of the window, select the **Table** tab.

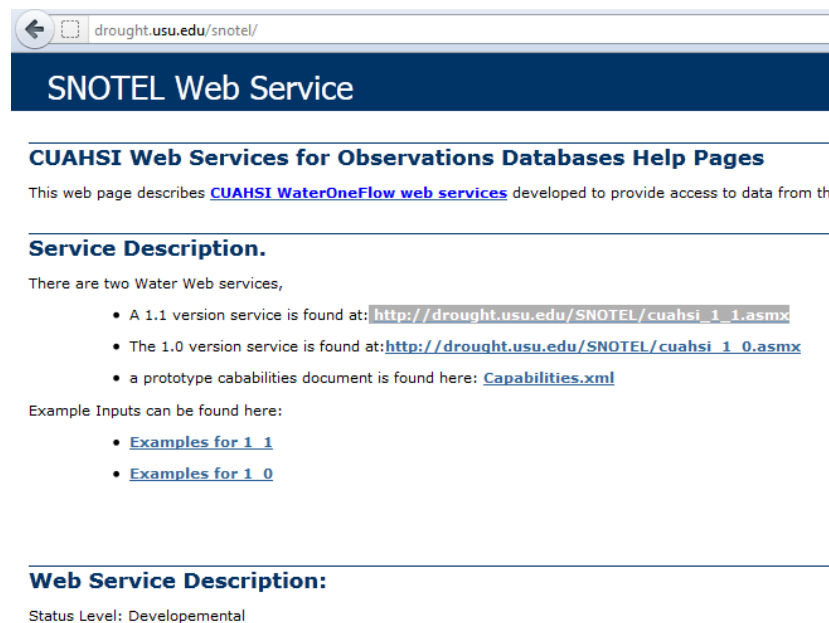3. Under the **Metadata** header, select the **Add** button.
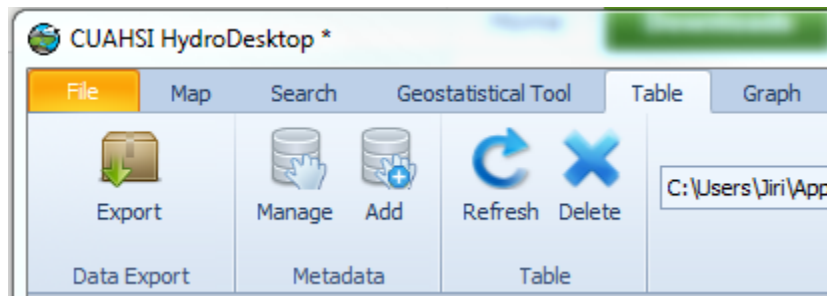
This will open a window to enter data for a web service. You can enter one web service at a time or multiple web services at once. For now, let's enter one service.

4. You will need to name your web service. This is an arbitrary name that is left up to the user.


You will also need the web service URL, which is typically found on the service's specified web page as seen highlighted below. This URL ends with the .asmx extension. In this example you will enter the URL:
`http://ws217.ps.isu.edu/MOSS/cuahsi_1_0.asmx`

There is also the option of filling in specific metadata for the web service you are entering, if it is known.

5. When finished, select **Update Database.** HydroDesktop will display a confirmation message when the services have been added. Click **OK** to close the message.

6. Return to the **Metadata** header in the upper tool ribbon and select the **Manage** button. This will display the web service management window.

7. Select the check box next to the web service you entered and select **Download Metadata**.
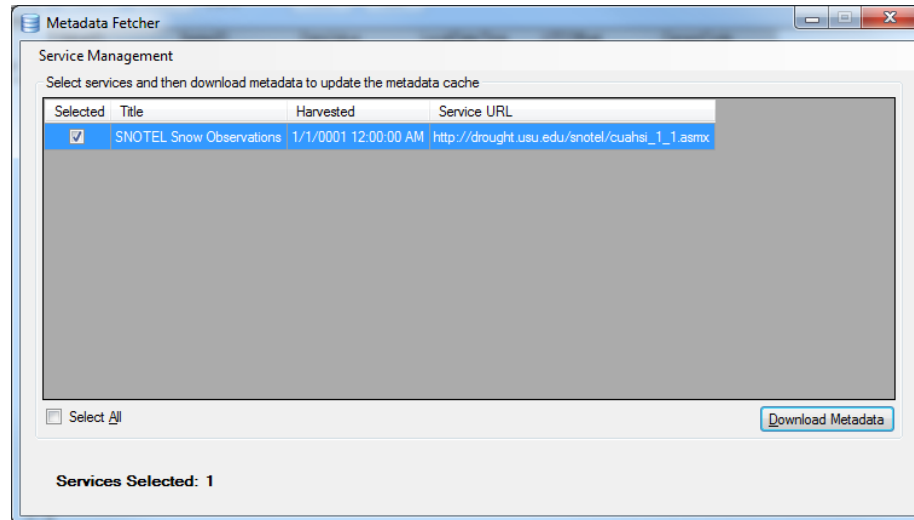

This will connect HydroDesktop to the web service and download the metadata available for the service. When the download has completed, click **OK** and close the web service management window.

8. Go to the **Search** tab in the upper tool ribbon and click the **HIS Central** button in the Data Sources panel. This will display the option of searching published web services in HIS Central. We want to search within the local web service we entered, which isn't registered with HIS Central, so in the Select type of catalog: option select the **Metadata Cache** option.
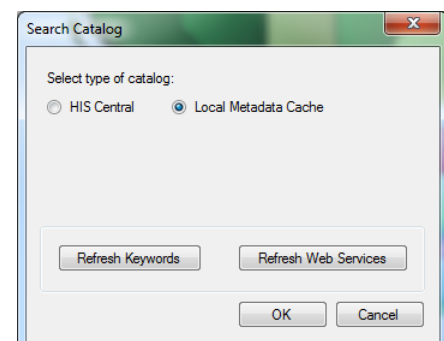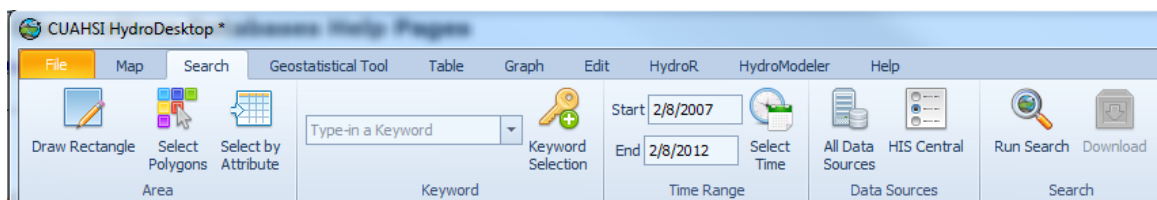
9. In the search tab on **Area** panel, choose **Select by Attribute**.
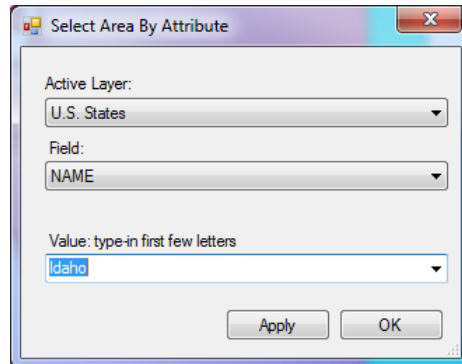
10. Under **Active Layer:** select 'U.S States' from the list. Under **Value:** select Idaho. Click **OK**. The map zooms to the state and highlights it in blue.

11. In the **Time Range** panel of the **Search Tab**, click the **Select Time** button.

12. Specify a **Start Date** of **10/1/2003** and an **End Date** of **10/21/2010**. You can click and type the numbers in directly, or you can click the drop down arrow next to the date to open an interactive calendar.
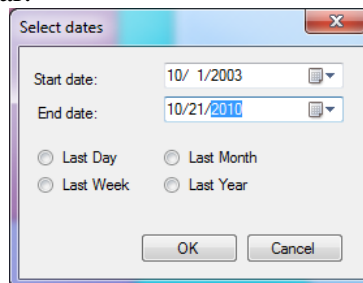
13. In the Data Sources panel, select the 'All services' button. Here we can see the web service we entered and tell HydroDesktop to only download from this service.
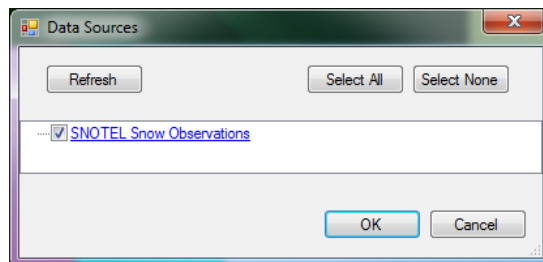
14. In the **Search Panel**, start typing "Precipitation" in the Keywords text box. The list of keywords automatically selects keywords that match your search. You can also select the keyword in the drop-down.
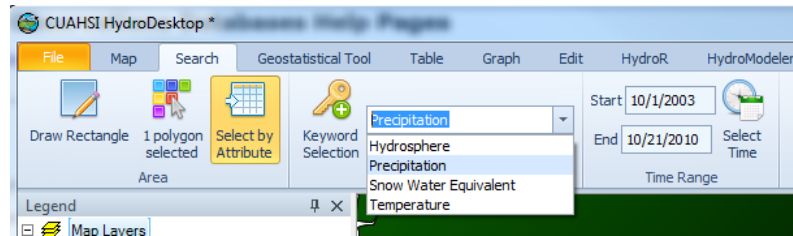
With search parameters set, you will now tell HydroDesktop to run the search for data.

15. In the **Search Panel**, click **Run Search**.

16. After the search is finished, click "Close" on the message showing search progress. The sites matching your search criteria are shown in the map.

17. In the **Map**, select the single data set that the search returned. Move the mouse over one of the sites. This shows a context menu with the name of the site and available variables.
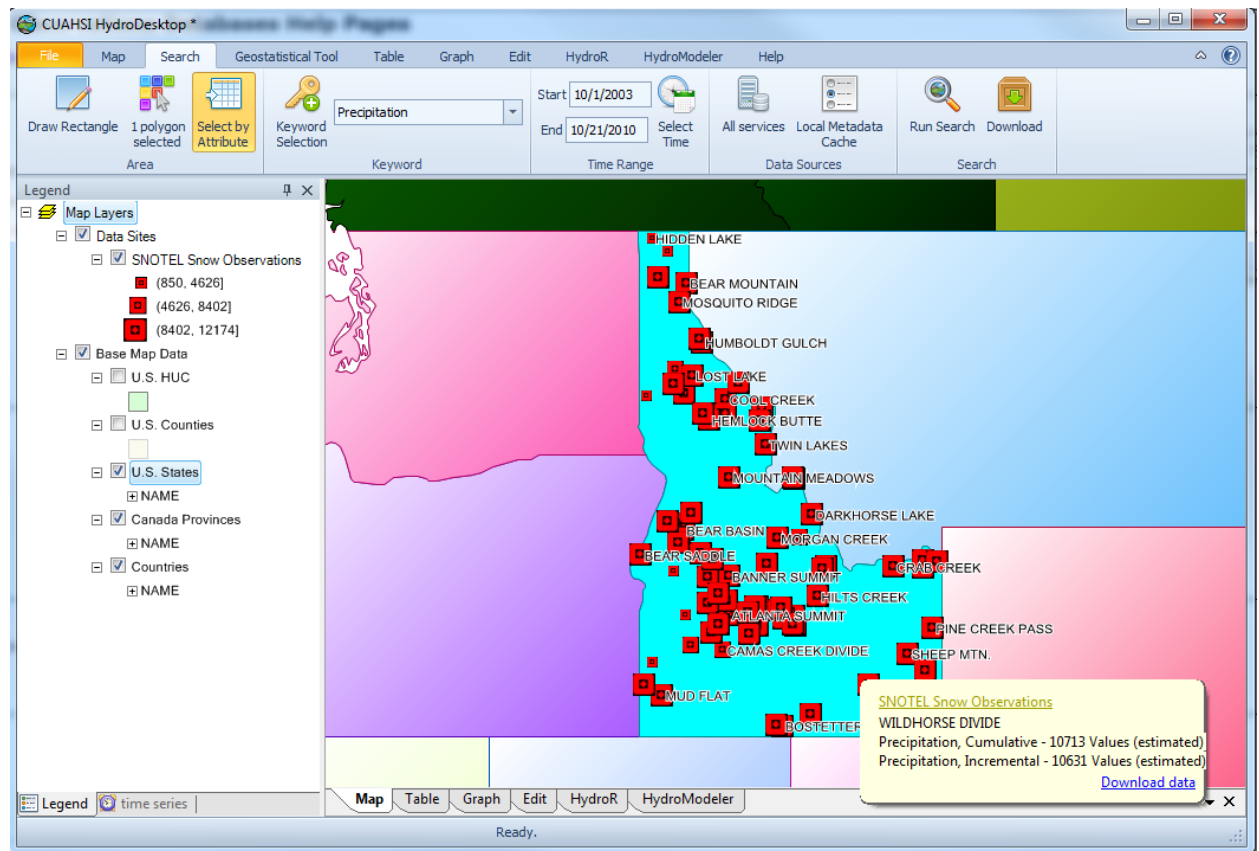

18. Click **Download Data** to retrieve the data from the web service. The Download Manager window will appear and a notification box will pop up when data is finished downloading. Click **OK** and close the Download Manager.

19. The search results are displayed in the **Map Layers** section on the left side of the window. Sites with downloaded data have a symbol with a green border.
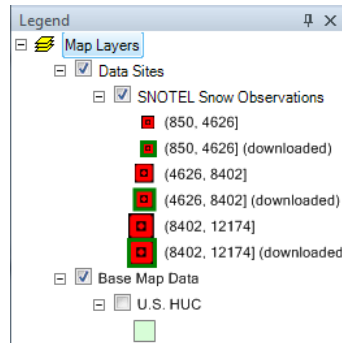
20. Downloaded data can be viewed numerically by selecting the **Table** tab in the upper tool ribbon, or it can be viewed graphically by selecting the **Graph** tab. There is also the option to edit data sets that have been downloaded, which is covered in a separate tutorial.
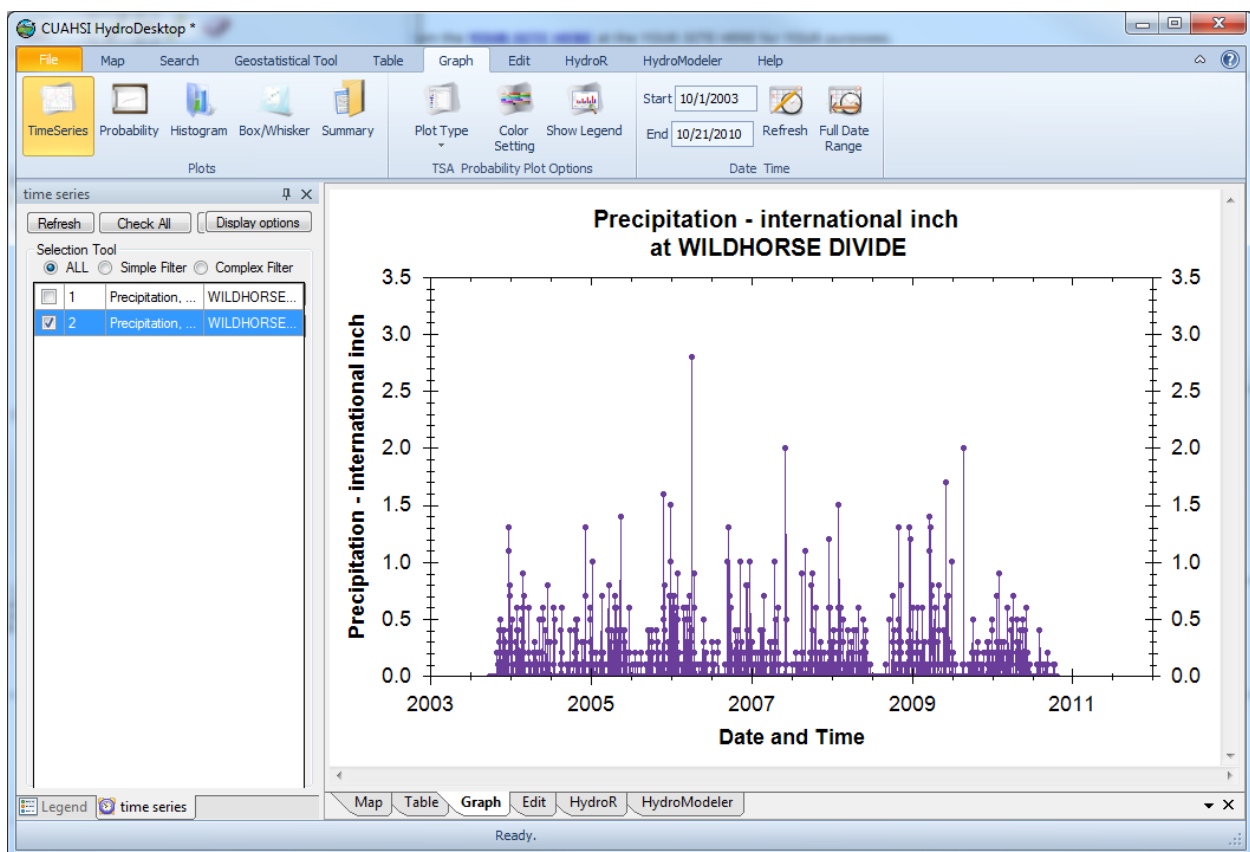
Congratulations! With your data in hand, you have completed the exercise and learned how to use HydroDesktop to download data from web services not published with HIS Central. Feel free to experiment with other functionality and be sure to give feedback using the Help tab. This concludes the main portion of the exercise.