

AHIS Meta-Data Editor, Search Interface, Database Access

Corinna Gries (GIOS)

Shankar Bhargav (computer science)

Hung Nguyen (computer science)

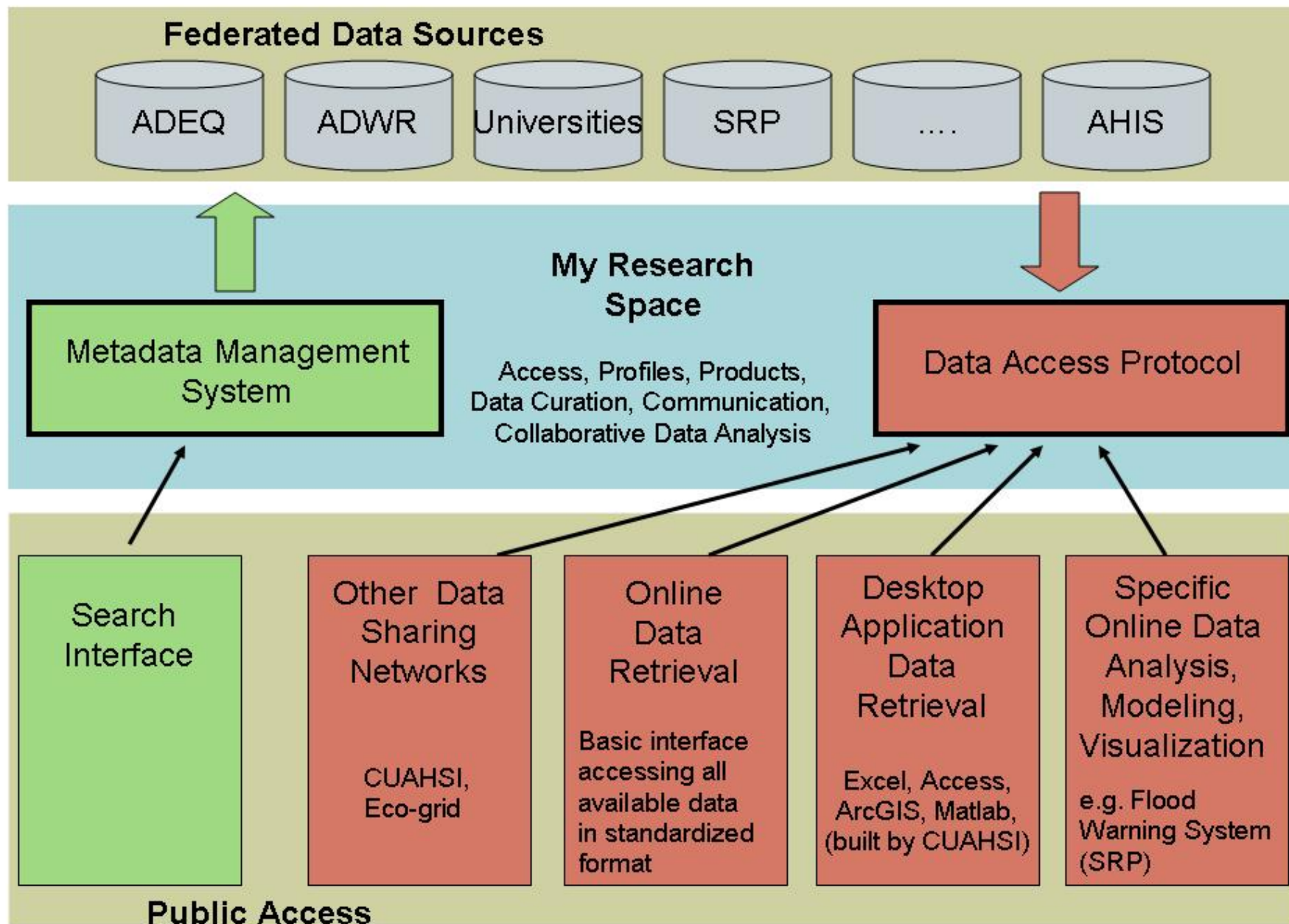
Alethea Kimmel-Guy (geography)

Raul Aguilar (GIOS)

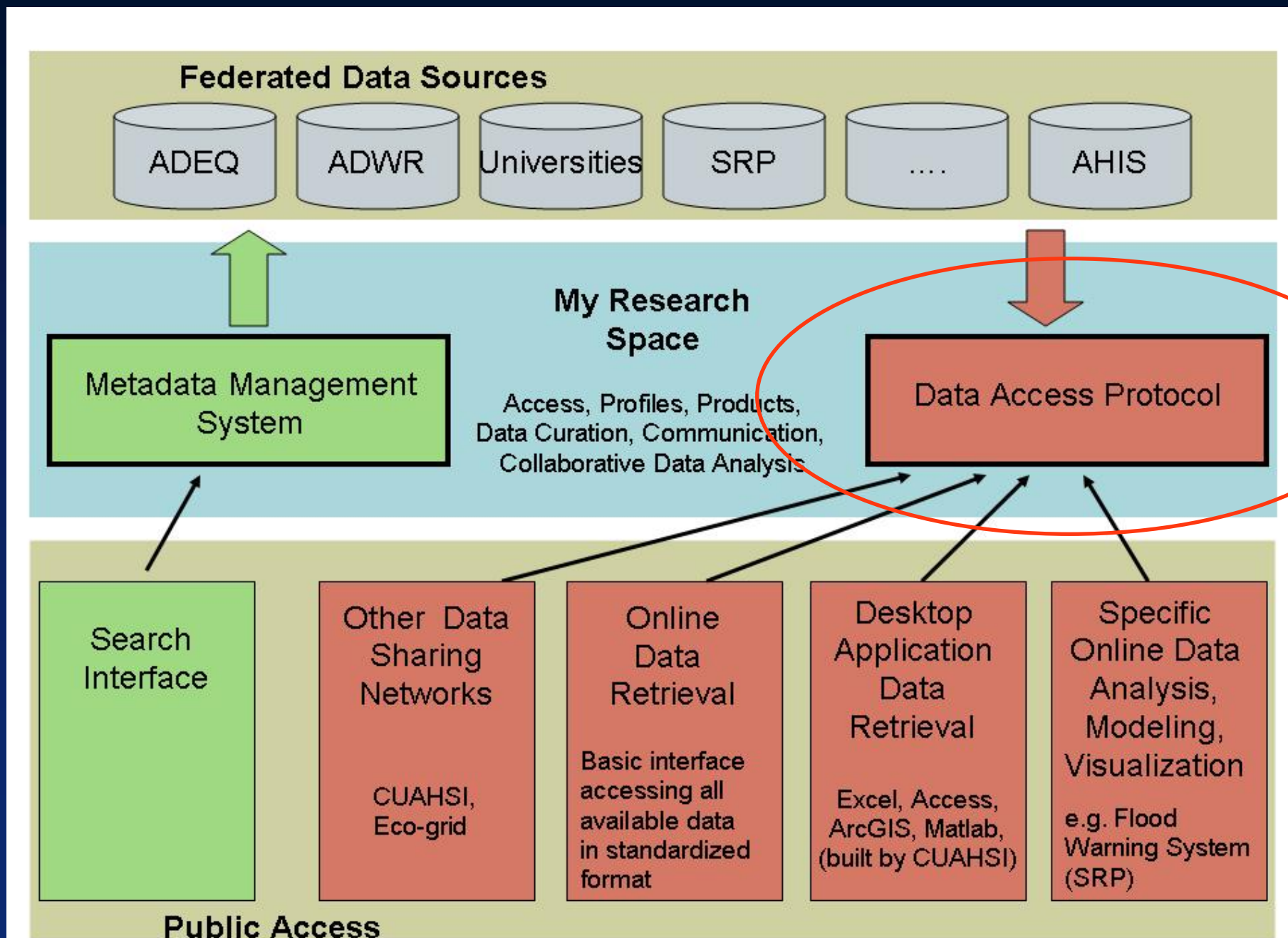
Huan Liu (computer science)

Hasan Davulcu (computer science)

Arizona Hydrologic Information System



Arizona Hydrologic Information System



Data Access

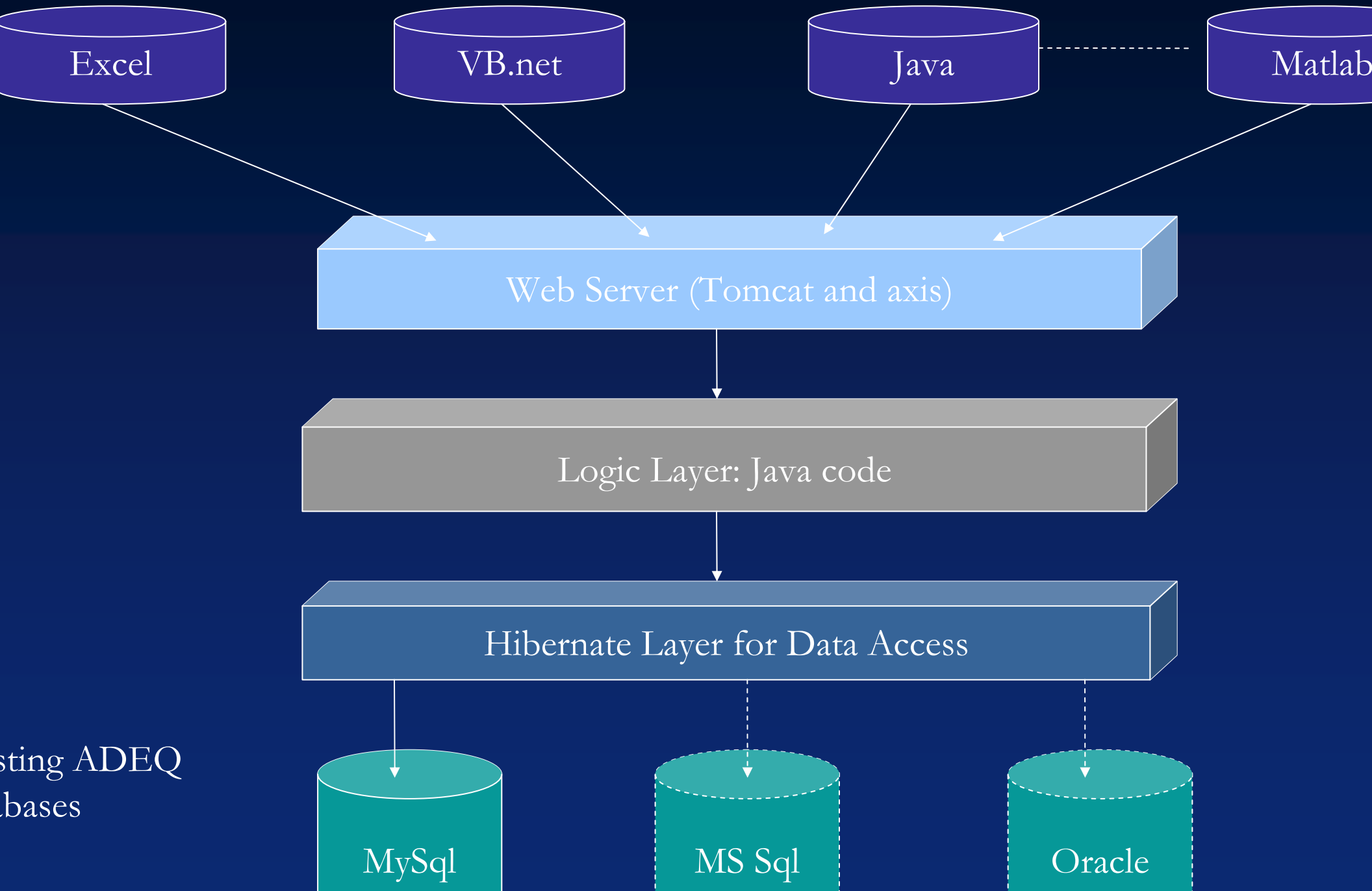
Standardized protocol

- Get Variables, Get Sites, Get Site Info

The original data storage structure of does not need to be modified

The architecture allows for easy portability to different databases

Data Access



Data Access

Method Name	getVariables
Description	This method returns an XML string containing a list of variables (variable code and name) for precipitation in the Upper San Pedro Basin.
Input Parameters	None
Output Results	<p>An XML formatted string:</p> <pre><getVariablesResults count="8"> <errorMessage /> <variable index="1"> <variableCode>11</variableCode> <variableName>15 Minute Precipitation</variableName> </variable> <variable index="2"> <variableCode>60</variableCode> <variableName>30 Minute Precipitation</variableName> </variable> <variable index="3"> <variableCode>13</variableCode> <variableName>Daily Precipitation</variableName> </variable> . . . </getVariablesResults></pre>

Data Access

Site and Variable Info

The codes from the **Sites** worksheet can be inputted on this worksheet to retrieve site and variable information.

Get Site Info

To see site description and a list of parameters recorded at a given site, input the **Site Code** for the site (from the **Sites** worksheet) into the yellow **Site Code** cell on the right. Then click the "Click to Get Site Info" button.

Get Variable Info

Once you have a list of variables for a given site, you can view more descriptive information about the variable by inputting the parameter **Code** into the yellow **Variable Code** cell, and then clicking the "Click to Get Variable Info" button.

Note: When running the macros in this worksheet, you get a "License information for this component not found" or "Active-X can't create object" error, when you need to reset the references to **HydroObjects** in VBA (Tools-References).

Do not change the cell positions below!

GetSiteInfo

Site Code --> 02087500

Click to Get Site Info

After running GetSiteInfo, results will appear below.

Name	NEUSE RIVER NEAR CLAYTON, NC
Latitude	35.647222
Longitude	-78.405

Variable Codes:

Code	Start Date	End Date	Value Count
00010	6/19/1968	9/28/1999	144
00020	1/21/1971	10/30/1973	4
00025	12/9/1982	9/28/1999	30
00028	9/7/1973	9/28/1999	103
00049	2/1/1955	9/1/1960	5
00060	6/19/1968	2/6/1973	55
00061	2/1/1955	9/28/1999	150
00070	8/29/1973	7/1/1974	7
00080	9/1/1955	9/26/1984	96
00095	2/1/1955	9/28/1999	120
00300	6/19/1968	9/28/1999	133
00310	9/7/1973	9/13/1996	47
00335	9/7/1973	12/10/1973	14
00340	1/16/1974	8/27/1974	23
00400	2/1/1955	9/28/1999	154
00403	10/12/1982	9/26/1984	22
00405	1/16/1973	3/23/1983	70
00410	6/19/1968	9/13/1996	130
00440	2/1/1955	9/26/1984	99

Do not change the cell positions below!

GetVariableInfo

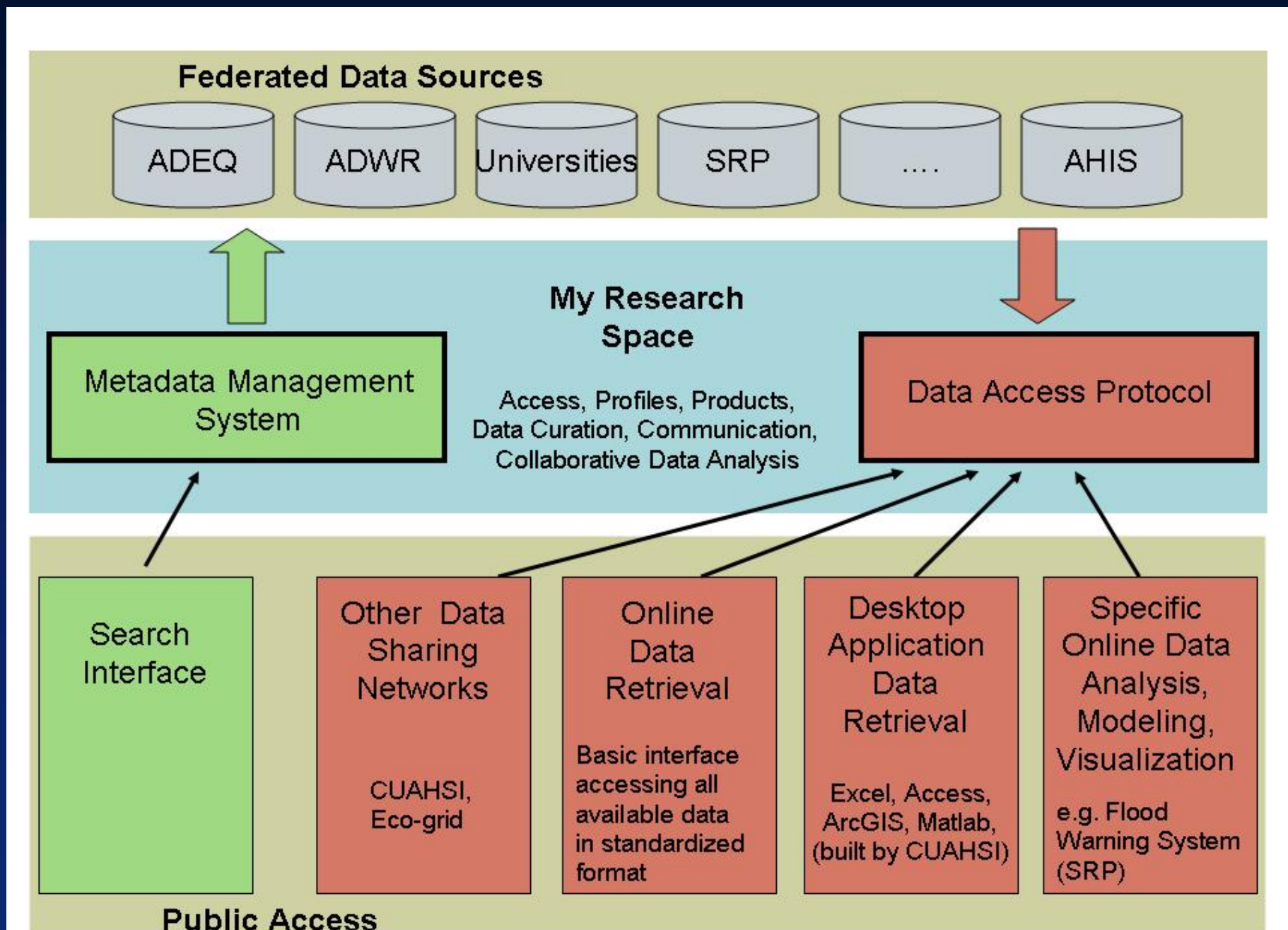
Variable Code --> 00060

Click to Get Variable Info

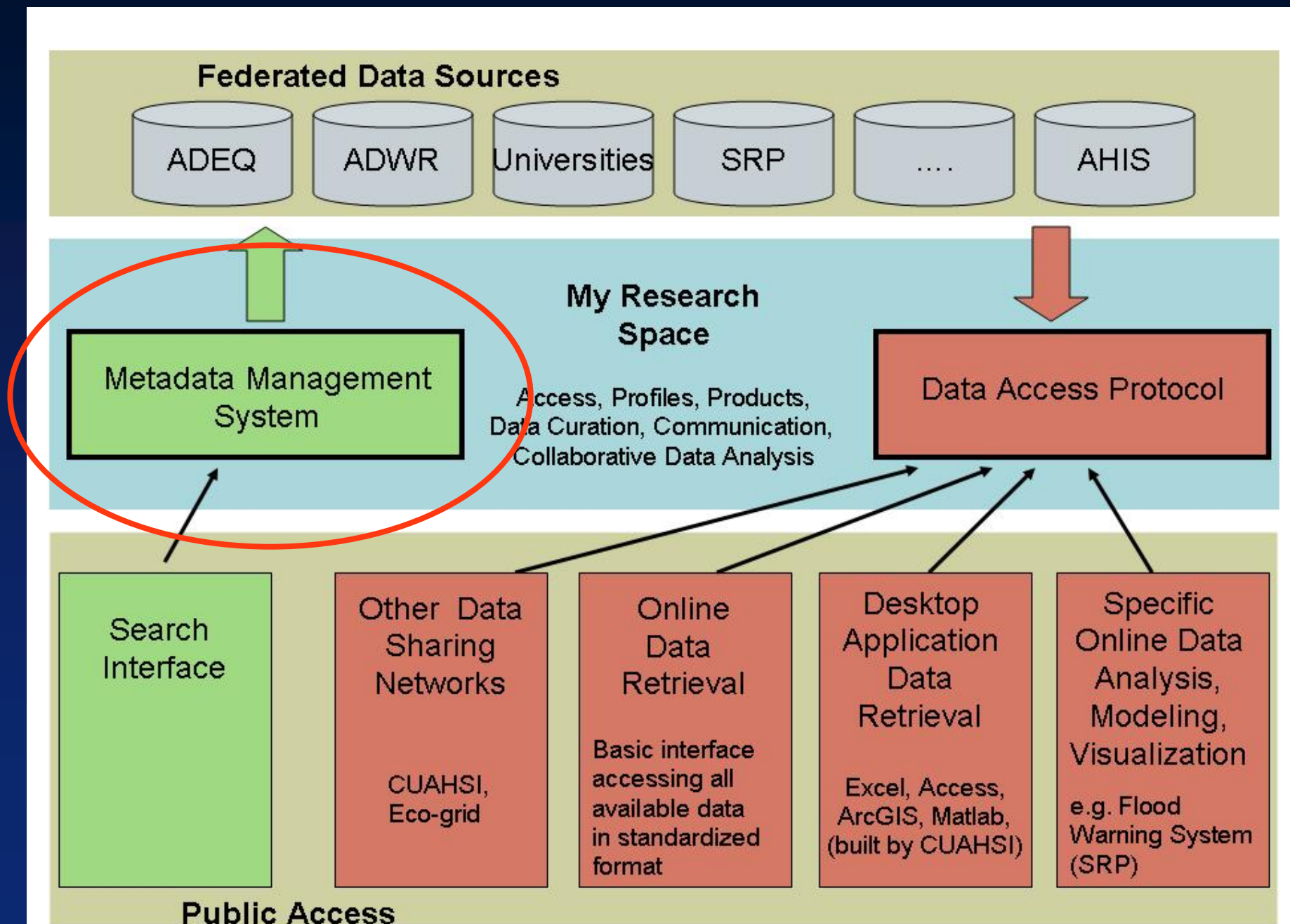
After running GetVariableInfo, results will appear below.

Name	Discharge, cu feet per second
Units	cubic feet per second
Description	

Arizona Hydrologic Information System



Arizona Hydrologic Information System



Meta-Data Editor

Web-based tool

Technology:

- File format: XML (FGDC, EML, NBII, ISO)
- File storage: XML Database (eXist)
- Interface: XForms based
- User Management: MySQL database

Meta-Data Editor

GIS Metadata Editor

Documents

Organization Name	Title	Edit	Delete
S	Test Doc	<input type="button" value="Edit"/>	<input type="button" value="X"/>
	Grandfathered Groundwater Right Applications	<input type="button" value="Edit"/>	<input type="button" value="X"/>
Water Quality Division, Groundwater Section	Drywell Database System (selected information is available on the ADEQ Web Site)	<input type="button" value="Edit"/>	<input type="button" value="X"/>

Meta-Data Editor

NHIS Metadata Editor

[Documents](#)

[Main](#)

[People](#)

[Keywords](#)

[Admin](#)

Basic

Title

Alternate Identifier...

Short Name

Publication Date

Language

Series

Publication Place

Edit Document ID: 311F5F49-26DD-8BD2-C2C1-E6B9A018DD0C

Meta-Data Editor

The screenshot shows the HIS Metadata Editor web interface. At the top, there is a blue header with the text "HIS Metadata Editor" in a stylized font. Below the header is a navigation bar with five yellow buttons: "Documents", "Main", "People", "Keywords", and "Admin". The "Main" button is currently selected. On the left side, there is a vertical sidebar with a blue border containing several menu items, including "al Info", "ual Rights", "e", "tion", and "ge". The main content area is titled "Abstract..." with a green plus sign. It contains a form with two sections: "Header" and "Body...". The "Header" section is empty. The "Body..." section contains a text area with the text "Basic information for grandfathered groundwater right applications filed 1980-1983 with ADWR." Below the form are three buttons: "save", "see_instance", and "to external process". At the bottom of the page, the text "Edit Document ID: 311F5F49-26DD-8BD2-C2C1-E6B9A018DD0C" is displayed.

HIS Metadata Editor

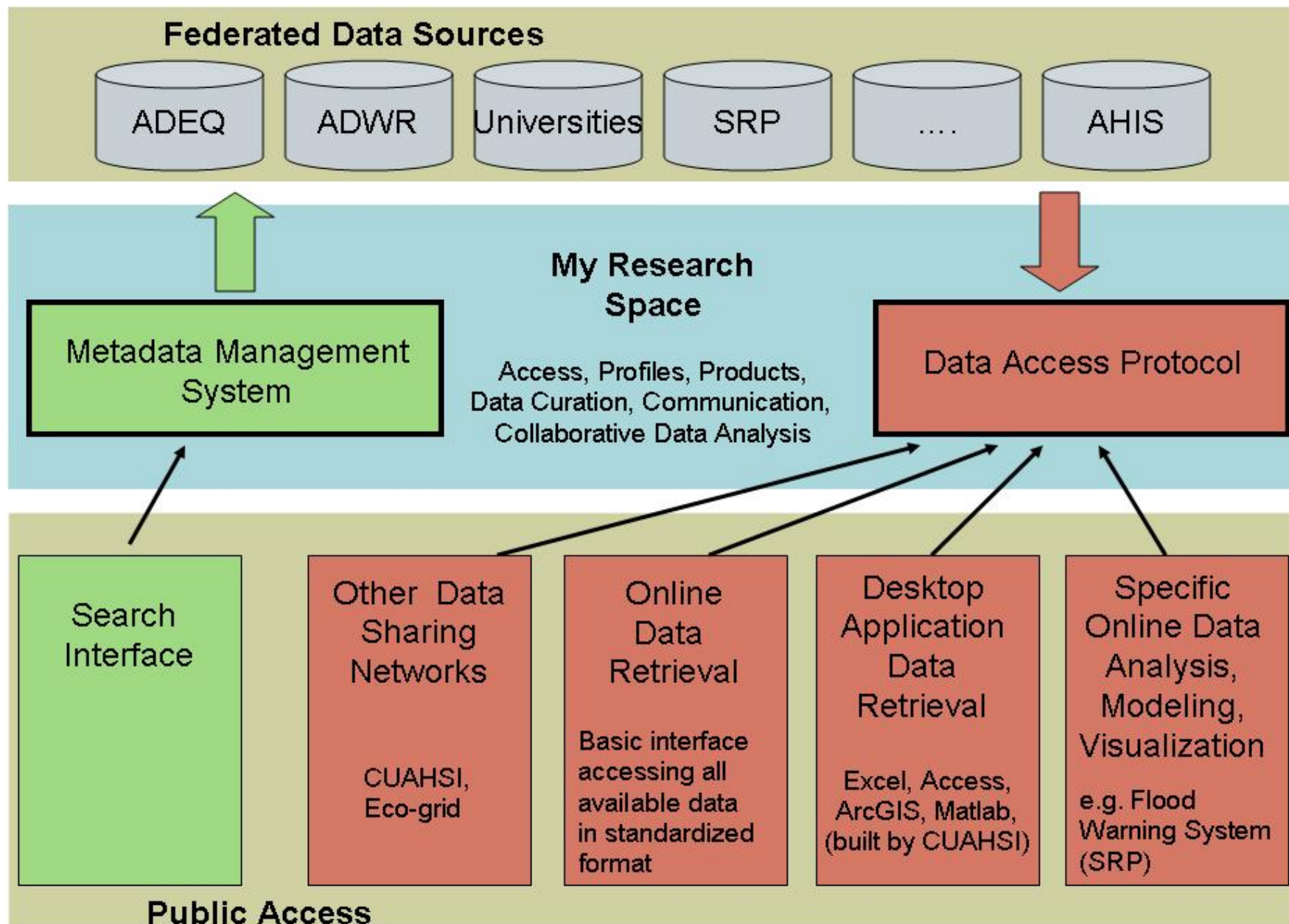
[Documents](#) [Main](#) [People](#) [Keywords](#) [Admin](#)

Abstract... +

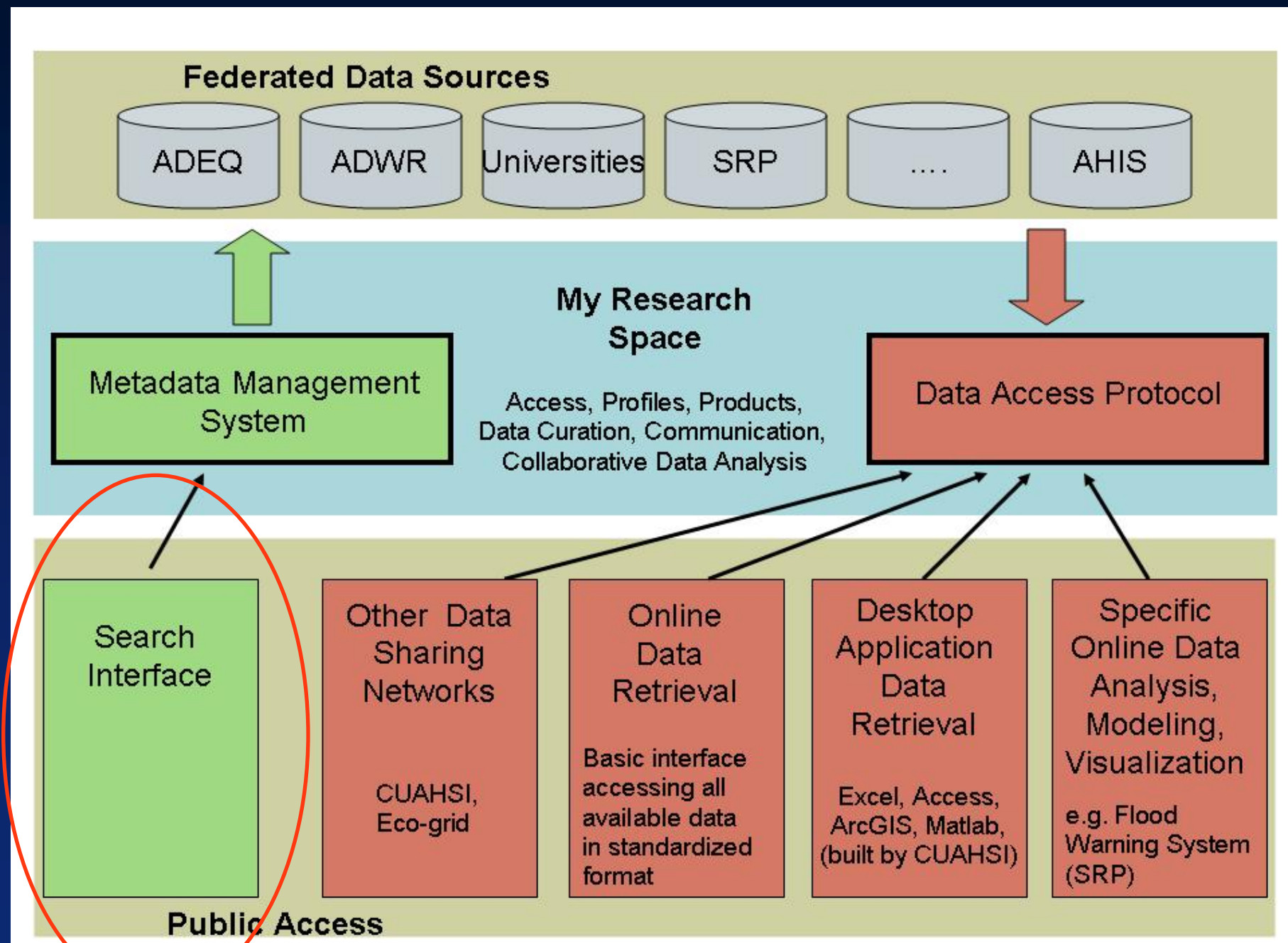
Header	
Body...	Basic information for grandfathered groundwater right applications filed 1980-1983 with ADWR.

Edit Document ID: 311F5F49-26DD-8BD2-C2C1-E6B9A018DD0C

Arizona Hydrologic Information System



Arizona Hydrologic Information System

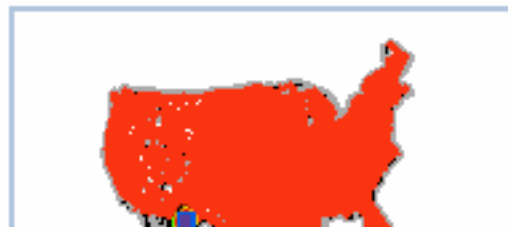
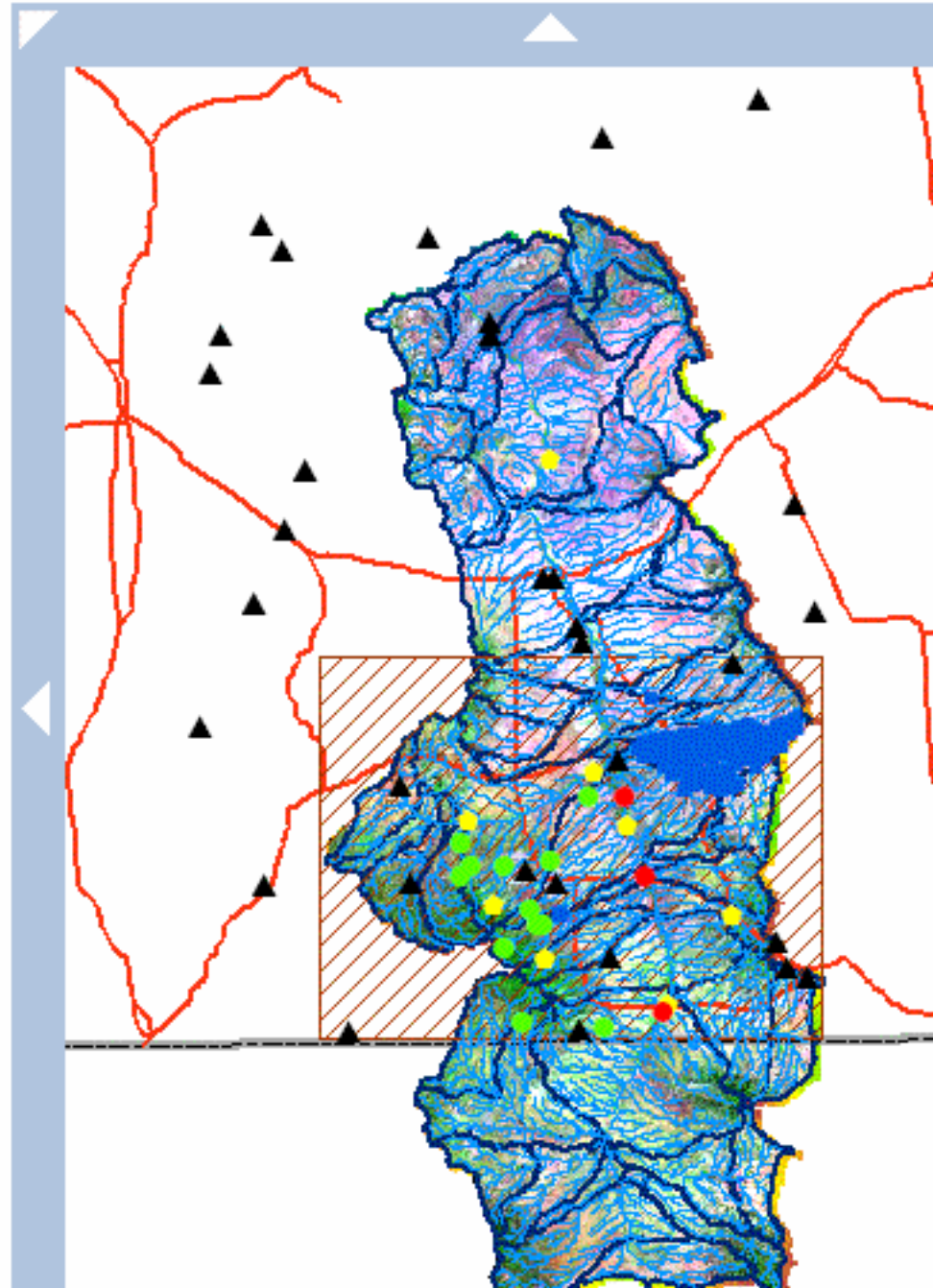


Search Interface

Locality
Search

Layers

- rainGages
AGENCY
 - EPG
 - EPG/USDA
 - ▲ NWS
 - USDA-ARS
 - USGS
- HydroEdges
- imageArea
- Watersheds
- Roads
- MXStates
- USStates



Search Interface

Keyword Search

BASIC VIEW

What are you looking for? ▼

Geographic Filter:

- Do not filter. I want to download data for all regions available.
- Geographic boundaries (rectangle, polygon, circle, centerpoint-radius)
- Political boundaries (state, basin, county, city, zip, etc.)

Temporal Filter:

- Do not filter. I want to download data for all times frames.
- Filter by time range.

- yearly ▼ to ▼
- monthly ▼ ▼ to ▼ ▼
- daily ▼ to ▼
- hourly ▼ ▼ to ▼ ▼

Search Interface

Keyword Search

- Guided
- Intelligent
- Ranking

Start a new search

Search Results

- [-] National Water Information System
 - [-] Nitrogen (Fresh Water) - 107 datasets
 - [-] Kjeldahl Nitrogen (Sediment) - 3 datasets
 - Kjeldahl Nitrogen (Bed Sediment) - 1 dataset
 - Kjeldahl Nitrogen (Suspended Sediment) - 2 datasets
 - [-] Kjeldahl Nitrogen (Water Column) - 26 datasets
 - [-] Total Nitrogen (Sediment) - 3 datasets
 - [-] Total Nitrogen (Water Column) - 7 datasets
 - Unfiltered - 3 datasets
 - Filtered - 4 datasets
 - [-] Nitrite + Nitrate (Water Column) - 22 datasets
 - [-] Nitrate (Water Column) - 6 datasets
 - [-] Nitrite (Water Column) - 16 datasets
 - [-] Ammonia (Water Column) - 24 datasets
 - [-] EPA STORET
 - [-] Nitrogen (Fresh Water) - 26 datasets
 - Kjeldahl Nitrogen (Water Column) - 5 datasets
 - Organic Nitrogen (Sediment) - 3 datasets
 - Ammonia (Sediment) - 3 datasets
 - Nitrite + Nitrate (Sediment) - 3 datasets
 - Nitrite + Nitrate (Water Column) - 5 datasets
 - Nitrate (Water Column) - 1 dataset

What's in it for you?

AHIS is work in progress. More services are going to be developed.

You will be able to make use of all of the current and future services!

Thank you!

Contact information:

corinna@asu.edu

dieter.otte@nau.edu

