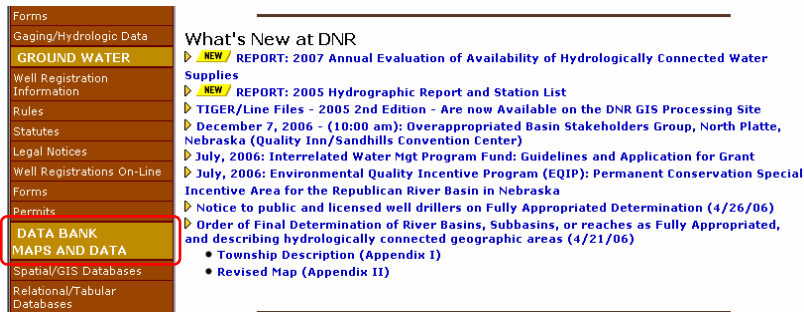


Lesson 1 - Downloading Publicly Available Data

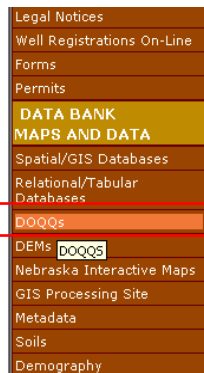
Exercise 1-2

Objective: Retrieval of **Compressed Digital Orthophoto Quadrangle (COQs)** imagery from the Nebraska Department of Natural Resources web site.

1. Go to Nebraska Department of Natural Resources (DNR) website at www.dnr.ne.gov and locate the **DATA BANK - MAPS AND DATA** section.



2. Click the **DOQQs** tab.



3. On the following page, select the **COQ (Compressed DOQ imagery)** section.



DIGITAL ORTHOPHOTO QUADRANGLES (DOQ)

Source: Nebraska Department of Natural Resources
Processed by: Data Bank (JH)

A **Digital Orthophoto (Quarter) Quadrangle, also known as DOQ**, is a rectified digital image of an aerial photograph with distortion and displacements removed and corrected for aircraft pitch, yaw and altitude, camera tilt, and terrain relief, thus conforming to the properties of an orthographic projection. The finished product is a spatially accurate image with ground features represented in their true planimetric positions. A DOQ is, therefore, a computer-generated image of an aerial photograph that combines the image characteristics of a photograph with the geometric qualities of a map. Also, the orthophoto coverage is a GIS product that can be overlaid and manipulated like any other coverage or layer, and offers significant flexibility.

Following Information Resources are available:

- DOQ Imagery
- **COQ (Compressed DOQ) Imagery**
- Other Rectified Digital Imagery
- Metadata-1993 NAPP
- Metadata-1999 NAPP
- Metadata-1999 NAPP-SP

4. On the following page, select the **DNR Text Interface** option.

Retrieval of COQs (1999)

The Nebraska Department of Natural Resources in cooperation with the U. S. Geological Survey, developed DOQs based on 1999 NAPP imagery and second generation of 10-meter DEMs. The 1999 DOQs are developed in two coordinate systems, UTM and the State Plane, referenced to North American Datum of 1983 (NAD83) with coordinates published both in meters and feet.

- [Metadata](#) of 1999 UTM DOQ/COQs

Following options are available to retrieve COQs.

- **DNR Map Interface**
 - To identify and download Quarter Quadrangles (COQQs) click on both active and visible layers of the Quarter Quad (COQQ) dataset and click the "refresh map" button on the interactive map.
 - Zoom in using the magnifying glass tool with the plus sign, then click hyperlink(lightning bolt) from the tool box and click the proper quadrangle to download the COQQs. Provides access to both 1993 and 1999 COQQs.
- **DNR Text Interface** - Including USGS/DNR COQs & FSA Imagery NEW
- **UTM Projections** (Zone 13, 14 & 15) - FTP site
- **Nebraska State Plane Coordinate System** (FIPS Zone 2600) - FTP site

5. Based on the results of Exercise 1-1, enter **4109653** in the USGS Number box and click **Submit**.

COQ DATA RETRIEVAL

Source: Nebraska Department of Natural Resources Data Base
 Updated Through 01/30/2007
 Processed by: Nebraska Department of Natural Resources

USGS Number: example 4009638

Select the count(ies) or quadrangle from the following lists:(Use CTRL and Left mouse button to select multiple list items).

**

DNRWebSite Quadrangle

Adams	Abbott
Antelope	Abbott Ranch
Arthur	Abbott Ranch
Banner	Adams
Blaine	Agate
Boone	Agate NW
Box Butte	Agate SW
Boyd	Ainsworth
Brown	Ainsworth NW
Buffalo	Ainsworth SW

6. The following table with a line corresponding to USGS Number **4109653**, Quadrant Name **Mead** and County **Saunders** will appear. Click **View**.

COQ DATA RETRIEVAL

Source: Nebraska Department of Natural Resources Data Base
 Updated Through 01/30/2007
 Processed by: Nebraska Department of Natural Resources

USGS Number: example 4009638

Select the count(ies) or quadrangle from the following lists:(Use CTRL and Left mouse button to select multiple list items).

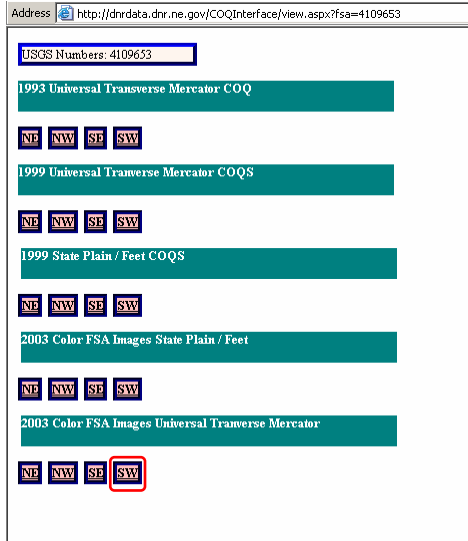
**

Counties Quadrangle

Adams	Abbott
Antelope	Abbott Ranch
Arthur	Abbott Ranch
Banner	Adams
Blaine	Agate
Boone	Agate NW
Box Butte	Agate SW
Boyd	Ainsworth
Brown	Ainsworth NW
Buffalo	Ainsworth SW

VIEW	USGS Number	Quadrant Name	County
View	4109653	Mead	Saunders

7. Select the southwest (SW) corner of the 2003 Color FSA Image projected using Universal Transverse Mercator.



The following web page will appear.

COQ DATA RETRIEVAL

Source: Nebraska Department of Natural Resources Data Base
Updated Through: 01/30/2007
Processed by: Nebraska Department of Natural Resources

Nebraska USGS 4109653SW 2003 Color FSA Images Universal Transverse Mercator

The following two links are required to process geo-referenced image.
[Click Here to Display/Save USGS 4109653SW.jpg \(May take several minutes\)](#)
[Click Here to Display/Save World Header File 4109653SW.jpg](#)

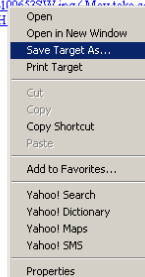
8. Right click on both links one by one and save both files in your working directory.

COQ DATA RETRIEVAL

Source: Nebraska Department of Natural Resources Data Base
Updated Through: 01/30/2007
Processed by: Nebraska Department of Natural Resources

Nebraska USGS 4109653SW 2003 Color FSA Images Universal Transverse Mercator

The following two links are required to process geo-referenced image.
[Click Here to Display/Save USGS 4109653SW.jpg \(May take several minutes\)](#)
[Click Here to Display/Save World Header File 4109653SW.jpg](#)



The downloaded files include the following image (4109653SW.jpg):



and the corresponding world coordinates file (4109653SW.jpw):

```
4109653SW.jpw.txt - Notepad
File Edit Format View Help
1.0000000000
0.0000000000
0.0000000000
-1.0000000000
709291.5000000000
4563112.5000000000
```