



# NEW HAMPSHIRE VIEW REMOTE SENSING ACTIVITIES 2015 - 2016

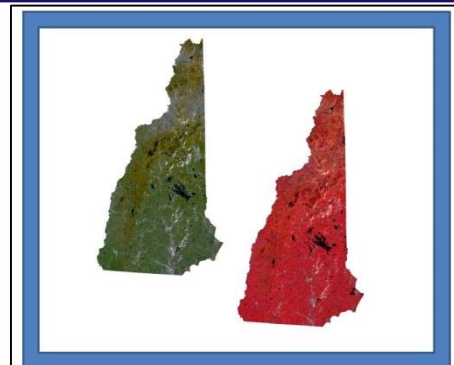


## VIEWING NEW HAMPSHIRE FROM SPACE

The NHView Director, together with a graduate student and undergraduate intern using funding from AmericaView created educational outreach materials entitled, "Viewing New Hampshire from Space". The goal of these materials was to provide introductory information about remote sensing for middle and high school teachers and their students. The materials are divided into two parts. The first part provides fundamental information about the concepts of remote sensing. The second part provides actual examples using locations within New Hampshire to demonstrate and test comprehension of the concepts from the first part.

The material is presented in two formats. First, there are two posters. One poster presents the fundamentals of remote sensing while the other provides the specific examples using New Hampshire locations. The second format is in pamphlet form as a pdf which can be either printed or distributed digitally. The pamphlet contains both the fundamental remote sensing concepts and the detailed New Hampshire examples. Finally, there is an answer sheet providing the correct answers for each example. Both the posters and pamphlet are available on the NewHampshireView website at: [http://www.nhview.unh.edu/education\\_FromSpace.html](http://www.nhview.unh.edu/education_FromSpace.html).

These materials allow teachers to introduce the concepts of remote sensing to their students while providing examples of local interest that are especially relevant to the students. Some examples are provided with complete explanations while additional examples can be used as either a self-test or as a class quiz.



### Viewing New Hampshire from Space

*A Bird's-eye View of the Granite State!*



*New Hampshire from Space education/outreach materials shown in pamphlet form.*

## CONTINUING SUPPORT OF A GEOSPATIAL SERVICES CENTER ON THE UNIVERSITY OF NEW HAMPSHIRE CAMPUS

**DISCOVERING THE WORLD THROUGH GIS**

**Wednesday, November 18**

**GIS Freebies & GIS Software Exhibit**  
10am to 4pm  
Geospatial Services Center, Room 337

**15-min Oral Research Presentations**  
10am to 3pm, on the hour & the half  
Natural Sciences Resource Center  
Floor 2, Dimond Library

**Center for Coastal & Ocean Mapping Exhibit & Interactive Pollution Map**  
10am to 4pm  
Natural Sciences Resource Center  
Floor 2, Dimond Library

**Poster Session**  
10am to 4pm, Wed. & Thurs.  
Natural Sciences Resource Center & elsewhere on Floors 2, 3, 4  
Voting in Room 337

**GISday 2015**  
at Dimond Library

Sponsored by:  
University of New Hampshire Library

Geospatial technologies are increasingly used in research and teaching within the humanities, social sciences, and other disciplines. Here at UNH, we are experiencing this growth of Geographic Information Systems (GIS) and related technologies in classes and research, so let's celebrate!

Poster for GIS Day 2015 at UNH.

As a result of a needs assessment conducted by the NHView Consortium, a GeoSpatial Services Center (GSC) was established on the UNH Campus in the Fall of 2013. After that successful pilot study year, the GSC has continued to provide support for GIS and remote sensing activities. The GSC is funded by the UNH Library, NHView, and other NHView partners.

Two consultants (graduate student or advanced undergraduate interns) maintain regular hours in the GSC. Consulting is available to faculty, staff, and students as well as members of the surrounding community that come into the library. The GSC has two high-end PC-based computers that run a variety of geospatial analysis software packages including ESRI ArcGIS and Hexagon Geospatial ERDAS Imagine (image analysis software). In addition, a number of public-domain software packages are available including QGIS, Google Earth, and MultiSpec. Information about the GSC is posted around campus and online.

For the last two years, the GSC has sponsored GIS Day on the UNH campus (see poster). This activity has further enhanced the presence of geospatial technologies on campus. GIS Day consists of posters, workshops, and oral presentations demonstrating the breadth of geospatial activities on campus.

NewHampshireView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state.



AmericaView Website:

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## BENEFITS TO NEW HAMPSHIRE

There are many benefits from the work of NHView to the people of New Hampshire. They include:

- There is a strong need for increased Science, Technology, Engineering, and Math (STEM) education across the US. The materials created here for introducing remote sensing, specifically to New Hampshire middle and high school students, can aid teachers with this goal. Remotely sensed imagery is very interesting and using local areas that students know makes these materials quite useful and relevant.
- The GeoSpatial Services Center (GSC) on the UNH Campus raises awareness and provides consulting to everyone interested in learning more about geospatial technologies.
- Mini-training presentations on remote sensing technologies recorded previously and released on YouTube and through the NHView website provides many of the New Hampshire State Agencies and others with information to which they might not otherwise have access. Many GIS experts need more knowledge of remote sensing as evidenced by the number of views for these presentations (See table below).

Mini-Training Title	Date Presented	Attended Live	Viewed Online as of 12/15/15	Viewed Online as of 11/10/16
Remote Sensing Basics	10/16/14	51	17,125	33,934
Selecting the Best Imagery	11/6/14	38	2686	5840
Accuracy Assessment of Remotely Sensed Data	12/4/14	48	1624	3591
The Power of NIR for Mapping	2/19/15	48	428	791

*Table showing the titles of mini-presentations by NHView Director that were recorded and available online. During the first year these were available, they were viewed 21,863 times. During the second year this increased to 44,156 views.*

## NEWHAMPSHIREVIEW CONSORTIUM MEMBERSHIP

### Department of Natural Resources & the Environment, UNH

The Basic and Applied Spatial Analysis Lab (BASAL) conducts basic research on spatial data uncertainty/map accuracy and applied research applying the tools of remote sensing, GIS, and spatial data analysis to solve natural resource problems.

### NH GLOBE Partnership, UNH

Carries out GLOBE teacher training in atmosphere, land cover, hydrology, soil and earth system science with a focus on land cover mapping and geospatial technologies.

### EOS-EarthData, UNH

A digital library of Earth science data that serves scientists, educators and the public.

### NH GRANIT GIS Repository, UNH

A cooperative project to create, maintain, and make available a statewide geographic database serving the information needs of state, regional, and local decision-makers.

### Civil Technology Program, UNH

The Thompson School of Applied Sciences provides a 2-year Associates Degree in the geospatial technologies.

### Diamond Library, UNH

The library maintains an extensive map and aerial photo collection for NH.

### Forest Watch, UNH

A New England environmental education activity using field, lab, and satellite data analysis methods for assessing the state-of-health of local forest stands.

### Cooperative Extension, UNH

Offers short courses in geospatial technologies including GIS, GPS, and field mapping.

### Dartmouth College

### NH Planning Commissions

### NH GIS Conservation Collaborative

### NH Fish and Game Department

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