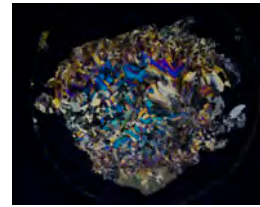


# Wisconsin Geological & Natural History Survey

*Understanding the earth  
Charting its history  
Sustaining its resources*

**2015**  
*year in review*

Providing objective scientific information about the geology, mineral resources, and water resources of Wisconsin



### Geologic studies

**COLUMBIA COUNTY.** Declining groundwater quality in Columbia County has driven the need for a bedrock map to help inventory and assess its groundwater resources. Additionally, understanding the geology and distribution of industrial sand and road materials will help local officials address land-use questions.

**DODGE COUNTY.** In 2015, we began the first year of a 4-year bedrock mapping project in Dodge County. Detailed knowledge of the bedrock is essential both for assessing groundwater resources and for pointing to the distribution of the county’s mineral resources.

**DRIFTLESS AREA.** Prior to this 8-year study the WGNHS had no geologic maps of the Quaternary geology of the Driftless Area. In addition to the mapping, we’ve been able to document the ancient reversal of the Wisconsin River, which bisects the Driftless Area.

**ONEIDA COUNTY.** Our map of Oneida County’s glacial geology can be used to answer questions about natural resource management (sand and gravel, water) and improve understanding of the geologic history of Wisconsin’s Ice Age.



**ST CROIX NATIONAL SCENIC RIVERWAY.** Geology is the foundation of park ecosystems and provides important information needed for park decision making. To meet this need, the National Park Service has asked the WGNHS to create a geologic map of the St. Croix and Namekagon Rivers for their geologic resources inventory.

# 2015

by the numbers

## Field work

WORKING ON PROJECTS IN ALL 72 COUNTIES

- 2,223 feet of rock core drilled
- 980 feet of geoprobe core drilled
- 153 groundwater monitoring wells
- 47 municipal wells geophysically logged

## Core repository

MAINTAINING A ROCK LIBRARY

- 600,000 feet of rock core
- 15,500 rock thin sections
- 11,000 water well cuttings



## Water resource studies

**WESTERN WISCONSIN.** Wells in western Wisconsin draw water from rock units with naturally occurring metals that could be potential health hazards. We are mapping the distribution and testing the composition of these rocks to better understand where these metals are present and how to avoid them in water supply wells.

**BAYFIELD COUNTY.** When a large-scale hog farm was proposed in Bayfield County, officials turned to the Survey for information about their groundwater and water supply wells. We analyzed data from over 660 wells and created a water-table map and cross-sections to help them make informed land-use decisions.



**COLUMBIA COUNTY.** More than 20% of well samples from Columbia County have nitrate levels higher than the drinking water standard. WGNHS prepared a groundwater model that provides a tool to determine where nitrate pollution is coming from. These models are tools for policy makers to manage their water resources.

**GROUNDWATER MODELS.** WGNHS staff worked on groundwater studies in Chippewa County, for the Chequamegon-Nicolet National Forest, for Dane County, and for the Little Plover River watershed in the Central Sands region.

**SPRINGS.** We are in the middle of a project inventorying all known springs in Wisconsin that discharge at least 110 gallons of water—the equivalent of filling two bathtubs—every minute. The database will strengthen our understanding of springs and their vulnerability to changes in land use and climate.

[WisconsinGeologicalSurvey.org](http://WisconsinGeologicalSurvey.org)



## Geologic data

### MAKING OUR DATA AVAILABLE

- 31,000 thin section photographs
- 3,300 pages of field notes scanned
- 540 feet of geoprobe core photographed

## Education and outreach

### ANSWERING YOUR QUESTIONS

- 24,400 publications downloaded
- 14,000 educational contacts
- 1,779 Facebook likes
- 1,030 Twitter followers



I am pleased to share this snapshot of projects we worked on in 2015. Our programming supports Wisconsin in areas ranging from water supply, construction and manufacturing, energy production, and agriculture—all of which connect to the state's geology.

Ken Bradbury,  
Director and State Geologist

**THE WGNHS AND THEIR CORE REPOSITORY**

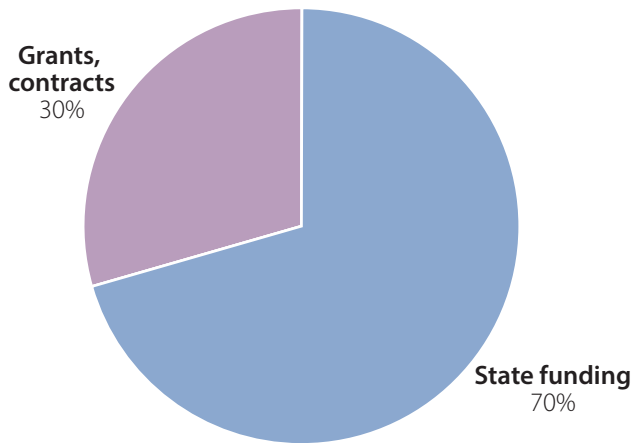
*have been invaluable resources for my research program. My students have gained tremendous hands-on experience by examining the cores, and these skills will easily translate to academic, private, or public geoscience sectors.*

**Robert Lodge**, assistant professor,  
University of Wisconsin–Eau Claire

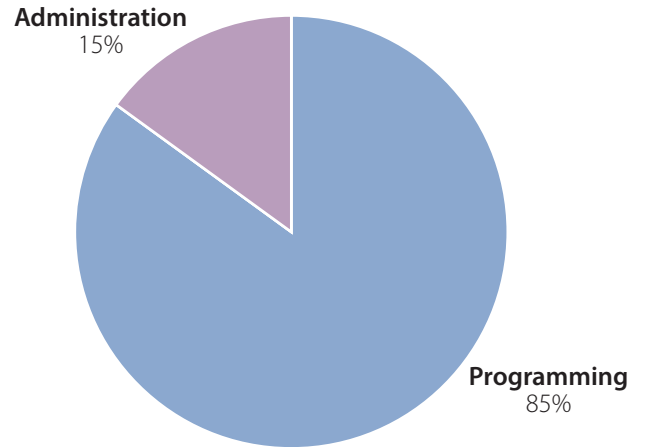
2015  
FISCAL YEAR

TOTAL REVENUE: \$2.4M

**Operating income**



**Use of funds**



**Wisconsin Geological and Natural History Survey**

3817 Mineral Point Road  
Madison, Wisconsin 53705  
608.262.1705 | WisconsinGeologicalSurvey.org

Kenneth R. Bradbury  
Director and State Geologist

