

# Hughes Center for Agro-Ecology

## Annual Report 2017-2018



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# Hughes Center for Agro-Ecology

Dear Friends,

Part of the University of Maryland, The Hughes Center connects stakeholders in agriculture, forestry, and environmental conservation to resources at the University of Maryland's College of Agriculture and Natural Resources.

The Center also is an incorporated 501(c)(3) nonprofit where the Board of Directors provide input and advice to guide priorities. This unusual structure gives stakeholders a unique opportunity to leverage the best partnerships in research, agriculture, forestry, government, and communities.

One of our proudest accomplishments this year has been building human capital. It started in-house as we mentored two new summer interns. New Board members are breathing a fresh perspective into deliberations and ensure a bright future informed by diverse perspectives. The Center forged new partnerships with Choptank Communications, Inc. on agricultural and forestry literacy for Maryland citizen-consumers. Another new study with Agricultural and Community Development Services, Inc. will find opportunities in Maryland's local food system.

As Governor Hughes assumes the role of President Emeritus, we are determined to carry on his work with a focus on human capital and building strong relationships that grow realistic solutions. We ask for your support; both financial and human capital investments will ensure that the future is bright for our state.

Edwin R Fry  
Board President

Dr. Suzanne Dorsey  
Executive Director

Since its inception in 1999,  
the Hughes Center has provided **\$10.4 MILLION**  
to support **72 RESEARCH PROJECTS**  
aimed at helping farmers, foresters, and  
local governments to achieve both economic  
success and sound environmental stewardship.



Danny Poet

## Staff

*Suzanne E. Dorsey, Ph.D.*  
*Executive Director*  
*Nancy Nunn, M.A.*  
*Assistant Director*  
*Josh Bollinger*  
*Communications Coordinator*  
*Barbara South*  
*Administrative Coordinator*  
*Richard Gomez*  
*Business Manager*  
*Linda Dawkins*  
*Program Management Specialist*

*The mission of the Harry R. Hughes Center for Agro-Ecology is to provide leadership to promote environmentally sound and economically viable agriculture and forestry as Maryland's preferred land use through research, outreach and collaboration.*

The Hughes Center works statewide with offices at the University of Maryland Wye Research and Education Center.

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# Agriculture



Edwin Remsberg

The Hughes Center drives recognition of Maryland's farmers as national leaders in environmental practices. Despite the agricultural community achieving a significant reduction of nutrients to the Bay, Maryland farmers will increase their efforts as the state's agriculture and local government sectors pull together to address the third phase of the Watershed Implementation Plan to restore the Chesapeake Bay.

## Highlights

In order for the state's farmers to survive and thrive, the general public needs to connect with Maryland's agricultural and forestry communities.

This year, the Center embarked on an effort to improve basic understanding of agriculture and forestry with Maryland's citizen-consumers. The Center has partnered with a professional communications firm to first measure consumers' agricultural literacy and then design a campaign to best engage Maryland consumers when purchasing food, wood, and ornamentals.

Research commissioned by the Center in fiscal year 2018 promotes soil health, nutrient management, local food, and farm profitability for Maryland's agricultural community to enhance both stewardship and profit.

Building Resiliency to Saltwater Intrusion, a study being performed jointly by researchers from the University of Maryland, George Washington University, the University of Delaware and Resources for the Future, aims to determine the extent and impact of saltwater intrusion on coastal farmland. The study examines saltwater's effect on soil health, nutrient management and postulates how a

future with more land impacted by salt may still sustain an agricultural land use.

Promoting Economic and Environmental Benefits of Multispecies Cover Crops is a two-year study through the Maryland Association of Soil Conservation Districts that hypothesizes there are economic, environmental and soil health benefits to be realized by farmers planting multispecies cover crops not solely intended for nitrogen uptake.

The Center also commissioned a University of Maryland study to look at optimizing nitrogen uptake in farm fields. Funding UMD scientists, the study will investigate the complex interplay of the soil biome and nutrient uptake. Results will address the need to keep nutrients in the plant growing zone, both to help yield and to prevent nutrient loss into the Bay

## What's Ahead?

- Measurement tools that quantify at the field scale how much carbon is pulled from the air into the soil. This project will provide reliable tools to support prosperous farms and climate mitigation policy.
- Release a Chesapeake Bay Foodshed Assessment that analyses local food distribution on three levels: consumer, supply chain and farm.
- Building strong relationships between the local governments, the farmers who implement Bay cleanup strategies, and Maryland state agencies. These relationships are key to the success of the final phase of Bay restoration.

# Forestry

A Maryland landscape with healthy forests will host a mosaic of forest varieties. Some old growth forests will be preserved. Working forests will provide wildlife habitat, clean air and water, and timber. Working forests depend on strong markets to thrive, especially locally focused wood products. In Maryland, the forestry community provides an economic impact of \$4 billion along with 10,000 jobs.

## Highlights

The Center seeks to help communities who depend on forests by supporting the cultivation and management of forests while promoting Maryland wood products. A Maryland landscape with communities dependent on forests for recreation, clean air/water, and wood products will have vibrant economies and a healthy environment.

Maryland's forested working lands cultivate trees to serve many purposes. Helping Marylanders understand the role of forestry in the state is a goal of our agricultural and forestry literacy program.

In FY 2018, the Center promoted healthy forest-based communities by 1) working in partnership with the Maryland Department of Natural Resources, the Center validated the use of kilns in small milling operations to produce high-quality Maryland wood, and 2) improving Maryland forest health in small-acreage properties by educating landowners and expanding the role of landscapers to provide forest management services like pest control.

In summer 2018, Hughes Center Russ Brinsfield interns developed a publication for the UMD Agriculture Law Education Initiative that overviews steps for farmers to manage woodlands. This guide will improve forest health

on privately held farmlands where it otherwise could be overlooked.

The Center in collaboration with forestry industry representatives has been exploring opportunities with the homebuilding industry and locally produced wine, beer and distilled beverages.



*Partners with the University of Maryland Extension will educate forestry landscapers and landowners on measures that can improve forest health of small-acreage properties.*

## What's Ahead

- Explore opportunities to fill and develop markets for Maryland-sourced wood and fiber.
- Perform a gap analysis to determine where regulations impede success in forestry health and industry.
- Support Maryland's Forest Action Plan, a strategic plan for the Maryland Forest Service.

# Chesapeake Bay

Jane Thomas, Integrated  
Application Network, UMD

All work performed by the Hughes Center converges at the Chesapeake Bay. Ensuring healthy waterways for this national treasure is a crucial aspect of the Center's mission. The Center champions improving watershed health in a changing climate with an increased population, developing forward-thinking solutions for Bay health and the communities so closely tied to it.

## Highlights

The Center has played a lead role in connecting local implementers of the statewide nutrient reduction goals (total maximum daily loads or TMDL), which drives cleanup of the Chesapeake Bay.

With a series of workshops in spring, the Center helped facilitate a discussion between local governments, the agricultural and environmental communities, and state agencies about challenges and opportunities in the next chapter of Bay cleanup.



*In addition to funding research to address saltwater intrusion on farm fields, the Hughes Center is part of a statewide workgroup to deliver recommendations on how Maryland communities can address the issue.*

These workshops led to several recommendations — born from the needs local implementers expressed during the workshops — that the Center made to the Maryland Governor's Chesapeake Bay Cabinet.

The recommendations focused on 1) the need for more than just technical assistance but trusted assistance for localities executing Watershed Implementation Plans, and 2) the importance of all sectors in a watershed to work together to develop innovative approaches to nutrient reductions.

The Center has published an online compendium of best management practices, [baybmp.org](http://baybmp.org), ensuring accessible information to those researching pollution reduction measures. The web tool has a filter function so the non-technical user can find practices that best fit their nutrient management goals and budget.

The Center plays a role in Maryland's Saltwater Intrusion Workgroup. Saltwater intrusion is the encroachment of saltwater into fresh groundwater. Intrusion is happening today in communities on the Eastern Shore like Ocean City and Kent Island but the threat may increase as sea levels rise. Commissioned after Maryland legislation signed into law in 2018, the workgroup will assess any potential threat and recommend actions to protect groundwater resources.

## What's Ahead

- Address shifting land uses and resulting impacts on rural regions like the Eastern Shore of Maryland.
- Future workshops in partnership with state agencies to educate local implementers on the final phase of Bay restoration.

# A note on Hughes Center financials

## A unique partnership

The Harry R. Hughes Center for Agro-Ecology is a nonprofit organization affiliated with the University System of Maryland. The Center supports the system's interests by promoting, sponsoring, and implementing scientific research and other services that help advance the university's mission. The Center and University System sign an annual agreement that describes the purpose of the Center and the relationship between the two parties. However, the Center is a legally separate, 501(c)(3) nonprofit organization, recognized as such by the Internal Revenue Service. The management and control of the Center rest with its Board of Directors.

## How is the Hughes Center funded?

The Center receives funding from a variety of private sources, the state government, and the University of Maryland. Donations from individuals and grantmakers support a variety of research and outreach activities, including the Harry R. Hughes Fellowship Endowment and Russ Brinsfield Internship Program. Annual allocations of state funds are administered through the University of Maryland College of Agriculture and Natural Resources, which also provides operations and compensation funding for five staff positions.

## About this Financial Report

The 501(c)(3) funding stream has been reviewed by an independent auditor. A full copy is available from the Center upon request. We have also listed the funds administered by the University System of Maryland and its agents; those funds are audited separately according to the system's protocol.

*Note: See entire 2017-2018 Financial Report on next page.*

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# Russ Brinsfield Internship Program

The Hughes Center has wrapped up its second year of the Russ Brinsfield Internship Program, a partnership between the Center and the UMD Agriculture Law Education Initiative. UMD College of Agriculture and Natural Resources student Danielle Naundorf and UMD Francis King Carey School of Law student Alison Venable joined the Center from May through August.

The Center's internship program offers a "unique opportunity" for students and recent graduates to put both agricultural and environmental perspectives in practice, Alison said.

In addition to their many projects, the interns spent time visiting local farming and forestry operations, experiencing first-hand what they were researching and learning about.



Alison Venable (left) and Danielle Naundorf were this year's Russ Brinsfield interns.

"It was one thing to think you know something through reading documents about it or reading the laws behind it or the scientific data, but it was another thing to see how it actually translates into the real world," Alison said. "Having that aspect of this internship really gave us a robust

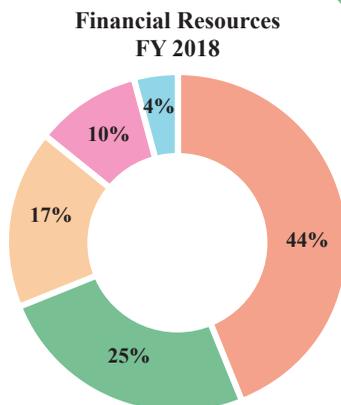
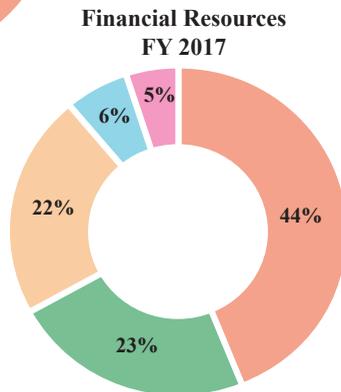
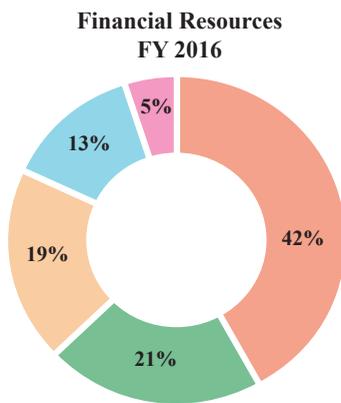
understanding of what we were working on."

The broad perspective delivered impactful results for several projects. They performed research on saltwater intrusion and their findings were used in Maryland's Climate Adaptation Working Group. Alongside the Aquaculture Coordinating Council and Don Webster, UMD Extension, the interns examined aquaculture theft laws.

The interns worked on two publications: 1) a guide that identifies steps for farmers to manage woodlands for profitability and environmental stewardship purposes, and 2) an outreach strategy for the Agriculture Conservation Leasing Guide.

# 2017-2018 Financial Report

- State Funds for Research and Outreach
- Grant Funding
- Operations and Compensation
- Harry R. Hughes Fellowship Endowment
- Total 501(c)(3) Nonprofit Funds



The 501(c)(3) Nonprofit Funding Stream			
Revenue	FY 16*	FY 17	FY 18
Contributions and Grants	6,000	19,180	222,735
Program Income	8,875	6,110	0
Interest	270	273	10
<b>Total Revenue</b>	<b>\$15,145</b>	<b>\$25,562</b>	<b>\$232,745</b>
Expenses	FY 16	FY 17	FY 18
<b>Programs</b>			
Research	0	0	89,562
Outreach & Education	12,805	11,793	15,757
<b>Supporting Services</b>			
Management and General	2,746	4,870	24,666**
Fundraising	0	4,805	0
<b>Total Expenses</b>	<b>\$15,551</b>	<b>\$22,468</b>	<b>\$129,985</b>
Net Assets at Beginning of Year	85,036	84,630	87,724
Change in Net Assets	-406	3,094	102,760
<b>Net Assets at End of Year</b>	<b>\$84,630</b>	<b>\$87,724</b>	<b>\$190,484</b>

Funds administered through the University of Maryland College of Agriculture and Natural Resources, University System of Maryland Foundation & College Park Foundation.			
	FY 16	FY 17	FY 18
Research/Outreach State Funds	667,808	805,387	838,097
Grant Funding	209,172	100,774	85,923
Operations and Compensation	311,775	400,736	322,912
Hughes Fellowship Endowment	343,313	419,809	479,994
<b>Total Administered Funds</b>	<b>\$1,532,068</b>	<b>\$1,762,706</b>	<b>\$1,726,926</b>

Funding Overview			
Total Administered Funds	1,532,068	1,762,706	1,726,926
Total 501(c)(3) Nonprofit Funds	84,630	87,724	190,484
<b>Total Combined Funds</b>	<b>\$1,616,698</b>	<b>\$1,814,430</b>	<b>\$1,917,410</b>

\*Note: The fiscal year runs from July 1-June 30.

\*\*In FY 2018, the Center made a one-time investment in legal services to develop new contract tool and update its operating agreement with the University System.



*Envision a future in which  
the Bay is healthy, and  
farmers and foresters see themselves  
as ecosystem managers who  
steward the land to  
produce food and fiber*

Dave Harp

# HUGHES CENTER<sub>for</sub> Agro-Ecology

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