

**2015 ESCOP Executive Committee Meeting**  
**J,W. Marriott Indianapolis**  
**November 16, 2015 (1:45 PM - 4:45 PM)**

Time	Agenda Item	Topic and Presenter(s)
1:45	1.0	<p><b>Call to Order</b> - Shirley Hymon-Parker, Chair</p> <p>1.1 Approval of Agenda</p> <p>1.2 Approval of July 21, 2015 ESCOP Meeting Minutes, Providence, R.I.  <a href="http://escop.ncsu.edu/meetattach/390_ESCOP%20Agenda72115.htm">http://escop.ncsu.edu/meetattach/390_ESCOP%20Agenda72115.htm</a></p> <p>1.3 Approval of Interim Actions</p> <ul style="list-style-type: none"> <li>• Payment for Invoices</li> <li>• Update from conference call on ECOP/ESCOP Alliance (changing of leadership)</li> </ul>
1:50	2.0	<b>FSLI</b> - Marshall Stewart
2:00	3.0	<b>NIFA Report</b> - Robert Holland, USDA/NIFA
2:15	4.0	<b>Cornerstone Report</b> - Hunt Shipman, Vernie Hubert or Jim Richards
2:25	<b>5.0</b>	<b><u><a href="#">Discussion - Number of Land-Grant Universities</a></u></b>
2:45	6.0	<b>Policy Board of Directors</b> - Steve Slack and Eric Young
2:50	<b>7.0</b>	<b><u><a href="#">Budget &amp; Legislative Committee</a></u></b> - Gary Thompson and Mike Harrington
3:00		<b>Break</b>
3:15	<b>8.0</b>	<p><b>North American Climate Smart Agriculture Alliance (NACSAA)</b>  - Ernie Shea</p> <ul style="list-style-type: none"> <li>• <b><u><a href="#">Land and Litter Challenge Overview</a></u></b></li> <li>• <b><u><a href="#">New Approaches to Poultry Litter Management in the Chesapeake Bay Watershed</a></u></b></li> </ul>
3:30	<b>9.0</b>	<b><u><a href="#">Communications and Marketing Committee</a></u></b> - Rick Rhodes and Dan Rossi
3:40	<b>10.0</b>	<b><u><a href="#">Science and Technology Committee</a></u></b> - Marikis Alvarez and Jeff Jacobsen
3:50	11.0	<b>NIMSS Update</b> - Jeff Jacobsen
3:55	<b>12.0</b>	<b><u><a href="#">National Impact Database Committee</a></u></b> - Bill Brown and Eric Young
4:05	13.0	<b>Discussion - Input from ESCOP for National IPM Dialog meeting on December 9<sup>th</sup></b> - All
4:20	<b>14.0</b>	<b><u><a href="#">ESCOP Diversity in Leadership Task Force</a></u></b> - Jeff Jacobsen
4:30	15.0	<b>CARET Report</b> - Connie Kays, CARET Liaison to ESCOP
4:40	16.0	<b>Updates and input on 2016 ESS - NEDA joint meeting</b> - Bret Hess and Mike Harrington
4:45	17.0	<b>ECOP Report</b> - Bev Durgan
4:50		<b>Other items/Adjourn</b>

Draft

Land Grant  
University  
Identity

Facing traditional issues as well as new global challenges, adequate resources are needed to support the current Land Grant Universities (LGUs); hence it is critical that no further expansion of the LGU network is legislated. Numerous studies highlight the need for additional investment in the existing LGU system. Collectively, the current LGUs comprise a nationwide network of institutions with shared identities, funding mechanisms, and missions as described under the Morrill Acts and subsequent legislation.

These ‘peoples’ universities conduct mission areas of teaching and learning, research and discovery, and engagement and outreach focused on agricultural and food systems, natural resources and sustainability, engineering, and rural economic and social/youth development. Other Acts of Congress expanded and clarified these missions and LGU institutional identity and uniqueness to include Agricultural Experiment Stations (Hatch Act 1887), Cooperative Extension (1914) and the rural and agricultural social sciences (Purnell Act 1925), including family and consumer sciences (historically associated with Home Economics). Uniform among this system of LGUs are:

- Colleges of Agriculture and related colleges, schools or programs
- Agricultural Experiment Stations
- Cooperative Extension Services
- Statewide Service

LGUs, therefore, must engage the breadth of the states they serve as well as the nation. Combined, Cooperative Extension, including 4-H youth programs, and Agricultural Experiment Stations form the cornerstone of the LGU missions and are necessary to provide statewide engagement and research. The LGUs, coordinated through the Board on Agricultural Assembly, have evolved with the transformation of American society as agriculture, food systems, and rural society have changed. This identity historically continues to separate LGUs from other universities. While LGUs serve metropolitan areas and provide a much wider range of faculty talent to social, economic, and environmental issues, they continue their agricultural, food systems, youth development, and rural agendas.

The transformation of American public higher education during the late 20<sup>th</sup> and early 21<sup>st</sup> century has included increasing commitment to research and outreach, often inspired by the success of LGUs to systematically integrate learning, discovery and engagement. However, the statutory identity of LGUs, as legislatively expressed in the Acts of Congress (noted above) and the specified focus on agriculture, engineering, food systems and rural social institutions provide historic and legislatively specific missions for service and Cooperative Extension to the states they serve are unique. LGUs are also unique among educational institutions in the U.S., in that they receive Federal appropriations that are available only if state matching funds are provided.

**Item**

**ESCOP Budget and Legislative Committee**

**Agenda Brief Presenters: Gary Thompson and Mike Harrington**

**For information only**

The committee holds regular conference calls on the last Tuesday of each month. These calls have generally been well attended. The current B&L Committee membership is shown below.

<p><b>Chair:</b> Gary Thompson (NERA)</p> <p><b>Delegates:</b>  Moses Kairo (ARD)  Carolyn Brooks (ED-ARD)  Karen Plaut (NCRA)  Ernie Minton (NCRA)  Tim Phipps (NERA)  John Wraith (NERA)  Bill Brown (SAAESD)  Saied Mostaghimi (SAAESD)  Jim Moyer (WAAESD)  Tom Holtzer (WAAESD)</p> <p><b>Executive Vice-Chair</b>  Mike Harrington (WAAESD)</p>	<p><b>Liaisons</b></p> <p>Rick Klemme (ECOP Liaison)  Robin Shepard (ED-NCERA)  Bob Holland (NIFA)  Paula Geiger (NIFA)  Vacant (ARS)  Glen Hoffsis (APLU Vet Med)  Eddie Gouge (APLU)  Ian Maw (APLU)  Connie Pelton Kays (CARET)  Cheryl Achterberg (APLU - BoHS)</p> <p>Jim Richards (Cornerstone)  Hunt Shipman (Cornerstone)  Vernie Hubert (Cornerstone)</p>
---	--

**New Initiatives Document:** Alan Grant, BAC Chair, presented the ESCOP and ECOP approved document to the BAC at its meeting on Oct 20. The document was approved as presented by the BAC and will be forwarded to the Policy Board for adoption.

**Crop Protection Update:** The consolidation of pest management lines had unintended consequences, namely the allowance of indirect charges in the Extension Pest Management Program. Fewer than 50% of institutions waived indirect costs. Solutions to the loss of approximately \$3 million to the Extension IPM program are being

sought. According to the NIFA General Counsel, moving the program under Smith-Lever 3d (while negating indirect charges) would preclude funding of *any* research and all programs would need to be re-competed.

Robin Shepard, Jim Richards, and Mike Harrington recently met with NIFA pest management staff to seek solutions. The conclusion was to leave the program under 406 (current placement) and legislatively exclude the Extension Pest Management program from indirect costs. Language has been provided to congressional staff.

**Competitive Grants Transaction Costs Study:** The Committee is considering questions that are germane to the development of an overview of transactional costs involved in the federal competitive grants process. The Committee received a spreadsheet showing data from the AFRI synopsis reports. The funding shortfall minimum was \$387M in FY12.

The estimated transactional costs should reflect the amount of time a single investigator takes to develop a proposal. More complex proposals will likely cost more because there are additional administrative costs. The review process must also consider the administrative burden to institutions.

The primary outcome would be to fully understand the transactional costs of competitive grants, including those costs that are borne by the academic institutions. This information can be used in support of increasing the NIFA budget to its fully authorized (not allocated) amount of \$700 million. There was discussion about funding agencies other than NIFA and whether to include compliance issues as a component of the analysis.

**Institutional Requests for LGU Status:** The Committee has initiated discussion of the requests from institutions to attain LGU status. Central State University in Ohio was added as an 1890 last year with no additional resources to the overall 1890 federal budget allocations. The Louisiana legislature has recently passed a resolution requesting Grambling State University be admitted as an 1890 institution, and there have been inquiries from other institutions to be considered for 1862 status. There was a general consensus of the Committee that this is an important topic for consideration, possibly in partnership with the ECOP B&L committee. The Committee will be reviewing legislation that created the LGU system and mission.

Delmarva Land & Litter Challenge:

## **Win-Win Pathways for Agriculture and the Peninsula's Waterways**

---

Through the new Delmarva Land & Litter Challenge<sup>i</sup>, a diverse group of organizations representing grain producers, chicken growers, poultry integrators, conservationists, academic partners; along with agribusiness, finance and service providers are joining forces and collaborating in a new way forward for managing poultry related nutrient pollution on the Delmarva Peninsula. Together they have committed to provide catalytic leadership in accomplishing the following outcomes and goals:

*Delmarva farmers and their agri-business partners are respected stewards of the land, guardians of natural resources and champions of the rural cultural heritage in the Chesapeake Bay watershed. By 2025:*

- ***Delmarva agriculture is regionally neutral in importing and exporting nutrients, and wherever possible, nutrients are recycled locally to support sustainable agricultural operations; and***
- ***Nutrients are utilized in farming operations without negative environmental impacts.***

Despite the substantial progress that has been achieved over the past five years in reducing poultry nutrient pollution, much work remains to be done to accomplish the goals that have been established for the peninsula. In support of these efforts, the ***Delmarva Land & Litter Challenge*** is uniting stakeholders, who have often been at odds over strategies and pathways for achieving water quality and habitat goals, in an epic quest to achieve a new future- a future where healthy and productive bays, rivers and streams across the peninsula are underpinned and supported by a vibrant and sustainable agricultural economy.

This large landscape initiative, covering 5.45 thousand square miles, will require unprecedented, communication, collaboration and cooperation among the project partners. It will also require a new way forward for addressing water quality challenges from animal agriculture operations, as the policies and practices of the past will not meet the needs of tomorrow.

The ***Delmarva Land & Litter Challenge's*** efforts will be focused primarily along two pathways- ***responsible land application of animal manure and litter and alternative uses and markets for manure and poultry litter.***

Initial work areas will include the formation and empowerment of multi-stakeholder action teams and partnerships; efforts to harmonize frameworks for addressing nutrient pollution challenges across multiple jurisdictions; the establishment of financial reward mechanisms for stewardship of ecosystem services; energizing and coordinating research; and transforming and modernizing information networks.

***Delmarva Land & Litter Challenge*** 2015 deliverables include:

1. a detailed plan for creating a **multi-stakeholder, landscape scale, shared leadership platform** where stakeholders addressing nutrient pollution from animal agriculture operations can work across county, state and watershed boundaries and design and deploy better integrated and more uniform policies, programs, practices and projects;
2. an action plan for establishing and funding a **center of excellence** on the Delmarva Peninsula dedicated to animal agriculture nutrient management support; and
3. a detailed roadmap for designing, implementing and financing an **ongoing integrated research program** that uses validated “on the ground” and regularly updated data and proven methodologies **to model nutrients levels at all levels.**

**Confirmed Launch Partners:**

Chesapeake Bay Commission  
Chesapeake Bay Foundation  
Chester River Association  
Delaware Department of Agriculture Delmarva Poultry Industry, Inc.  
Harry R. Hughes Center for Agro-Ecology  
Maryland Association of Soil Conservation Districts  
Maryland Farm Bureau Federation Maryland Grain Producers Utilization Board Maryland League of Conservation Voters  
Mid Atlantic Farm Credit Mountaire  
Perdue Farms  
State of Maryland (Chesapeake Bay Cabinet)  
Sustainable Chesapeake The Nature Conservancy  
Tyson Foods, Inc.  
WestRhode River Keeper Willard Agri-Service

***Delmarva Land & Litter Challenge*** partners believe that significant progress can be achieved in meeting the nutrient reduction goals that have been established for the agricultural sector.

Working together they are committed to supporting pathways for land management that will improve the health and productivity of agriculture and the Bay, while strengthening the economy that preserves and protects the region's rural cultural heritage. All stakeholders who embrace the ***Delmarva Land & Litter Challenge*** goals are invited to join in this grand collaborative to achieve these outcomes.

**Contact Person:** Ernie Shea, Project Facilitator [Eshea@SfLdialogue.net](mailto:Eshea@SfLdialogue.net) 410-252-7079

---

*The Delmarva Land & Litter Challenge is a self-directed project operating under the wing of Solutions from the Land, a 501 (c) (3) organization focused on land based solutions to global challenges.*

A detailed map of the Chesapeake Bay Watershed, showing the bay, its tributaries, and surrounding land. The map includes labels for major cities like Baltimore, Annapolis, and Washington, D.C., and various rivers and inlets. The text is overlaid on the map.

**New Approaches to  
Poultry Litter  
Management  
in the Chesapeake Bay  
Watershed:**

**Win-Win Pathways for  
Agriculture and the Bay**

**Delmarva Land & Litter Work Group  
August 5, 2015**



## Delmarva Land & Litter Vision & Goals

---

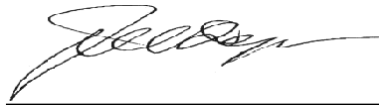
Delmarva farmers and their agri-business partners are respected stewards of the land, guardians of natural resources and champions of the rural cultural heritage in the Chesapeake Bay watershed:

**Together with our partners we commit to provide catalytic leadership to accomplish the following goals by 2025:**

- **Delmarva agriculture is regionally neutral in importing and exporting nutrients, and wherever possible, nutrients are recycled locally to support sustainable agricultural operations; and**
- **Nutrients are utilized in farming operations without negative environmental impacts.**



Allen Davis



Bob Frazee



Jim Hanson



Andrew McLean, Co-Chair



Bob Monley



Michael Phillips



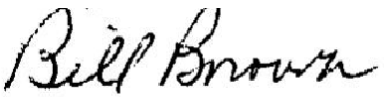
Beth Sise



Bud Malone



Mike Twining



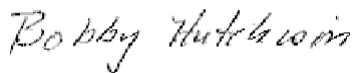
Bill Brown



Chip Bowling



Paul Spies



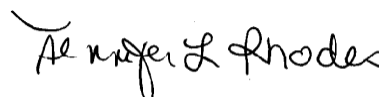
Bobby Hutchison, Co-Chair



Hans Schmidt



Sean Jones



Jennifer Rhodes

## Foreword

---

This report outlines a new way forward for managing nutrient pollution associated with the storage, transport and land application of poultry litter on the Delmarva Peninsula. It was developed by a self-directed cadre of leaders which included grain producers, chicken growers, poultry integrators, conservationists, academic partners; along with agribusiness, finance and service providers. We had the honor and privilege of serving as the Co-Chairs of the leadership team that guided the project and

*“A healthy and productive Chesapeake Bay is underpinned by a vibrant and sustainable agricultural economy in the watershed”*

produced this report.

The new way forward we are recommending begins with a new vision for the future; a future where a healthy and productive Chesapeake Bay is underpinned by a vibrant and sustainable agricultural economy in the watershed. Our vision does not force a choice between these two outcomes; we have high confidence that both can be achieved simultaneously.

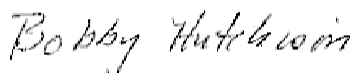
Our report begins with a vision, because we believe that doing so provides a way to refocus conversations from current challenges to desired outcomes; to reenergize and strengthen agricultural, conservation and environmental collaboration and leadership in bay restoration efforts; and to expand innovative, multidisciplinary approaches to agricultural land management that deliver multiple solutions from the land.

In the future we envision, Delmarva farmers, and their agri-business partners, will deliver and be rewarded, not only for producing high value food, feed and fiber, but also clean energy and ecosystem services, such as clean water, flood control, nutrient recycling, carbon sequestration and provisioning of habitat. By doing so, they will earn society’s respect as stewards of the land, guardians of natural resources and champions of the rural cultural heritage in the Chesapeake Bay watershed.

Towards this end, and together with our partners, the Delmarva Land & Litter Work Group commits to provide catalytic leadership to ensure the successful delivery of these multiple, high value solutions from the land.

We invite all Chesapeake Bay stakeholders to join us in an epic collaborative effort to achieve these outcomes.

Sincerely,



Bobby Hutchison, Co-Chair

Grain Producer

Cordova, Maryland



Andrew McLean, Co-Chair

Poultry Producer

Sudlersville, Maryland

## Table of Contents

---

Project Overview .....	1
Principal Findings... ..	2
Barriers to Forward Progress... ..	4
Win-Win Pathways... ..	8
Recommendations.....	9
Path Forward.....	14
Acknowledgements.....	16
Project Leaders.....	17
References.....	18

## Project Overview

---

*"In the Chesapeake Bay watershed, all sectors have a responsibility and moral obligation to reduce nutrient pollution"*

Through the Delmarva Land and Litter Project, a "kitchen cabinet" Work Group composed of a diverse cross section of grain growers, poultry producers and integrators, academic experts, extension agents, along with conservation and business partners, came together to assess progress in managing nutrient pollution associated with the storage, transport and land application of poultry litter on the Delmarva Peninsula. One of the group's primary objectives was to broaden the

dialogue with producers and value chain stakeholders on ways to utilize manure and poultry litter beyond what is needed to support crop production. The Work Group's mission was to review the "current state" of litter management and identify economically viable agronomic, technological or market based strategies, solutions and management models that can be deployed to abate agricultural nutrient pollution and utilize poultry litter that can no longer be land applied on phosphorous saturated soils.

The Work Group's efforts build on previous work completed under the Chesapeake Bay Manure Management Project, a 2009-2010 initiative, which culminated with the release of the report "*Animal Manure Management in the Chesapeake*

*Bay Watershed- New Opportunities to Meet Nutrient Load Reduction Goals*"<sup>1</sup>. That initiative explored opportunities to harness emerging technologies and markets that can transform excess manure nutrients from animal agriculture

operations into value added by-products that enhance net farm income and offset costs of containing or treating waste streams that cause environmental problems. A critical focus was put towards identifying ways manure could be managed to help meet environmental goals while simultaneously improving the farmers' bottom lines. A primary finding of the project was that

while there were no "silver bullet" solutions for managing animal manure and litter, there were a number of components and collateral programs which, if better



**Animal Manure Management in the Chesapeake Bay Watershed**  
New Opportunities to Meet Nutrient Load Reduction Goals

Natural Resource Solutions, LLC  
December 1, 2010

integrated, could help meet the nutrient reduction targets that were being established through the federal total maximum daily load program under section 303 (d) of the Clean Water Act.

The Delmarva Land and Litter Project began with one-on-one and small group listening sessions and information gathering interviews with chicken growers, grain producers, dairy farmers, poultry integrators, bankers, government officials, extension specialists, conservationists and value chain service providers. The objectives of these interviews was to obtain views on progress to date in addressing poultry litter related water quality challenges; surface fresh ideas for managing surplus manure and litter; and determine best strategies and tactics for engaging progressive leaders on solutions. Information gleaned from the interviews helped inform the Work Group which formulated the findings and recommendations outlined in this report.

### Principal Findings

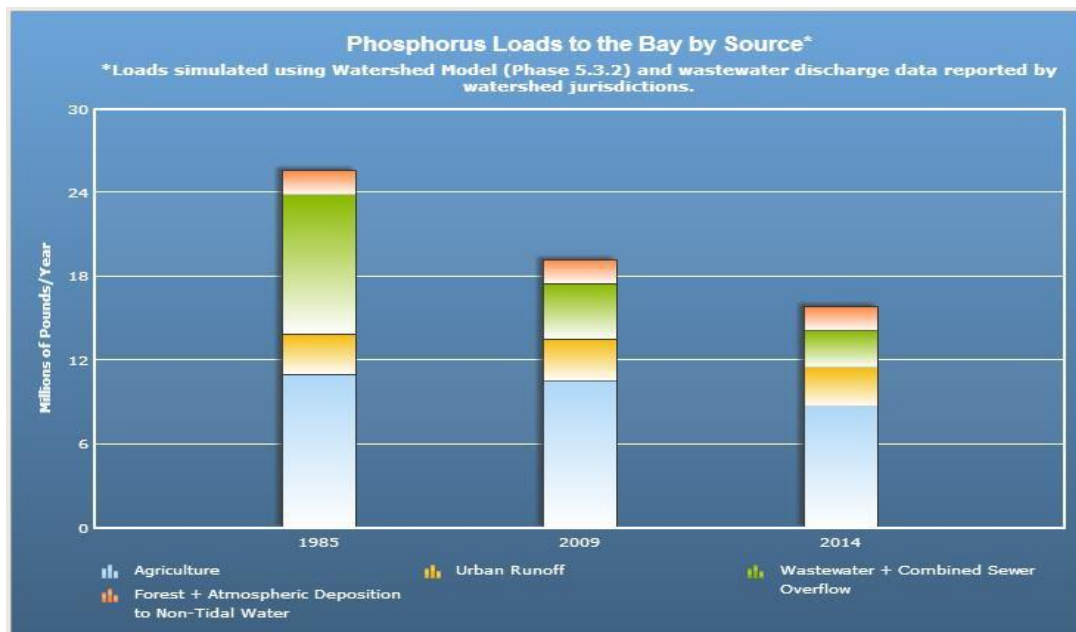
*“Farmers have reduced nutrient loadings to the Bay and its tributaries.*

*However, much work remains to be done”*

Federal and state reports confirm that substantial progress has been made over the past five years in reducing nutrient pollution associated with animal agriculture operations. Aided by expanded soil testing, greater attention to nutrient management planning, the adoption of precision agriculture technologies, equipment and practices, as well as the transport of manure and litter away from areas with phosphorous saturated soils, farmers have reduced nutrient loadings

to the Bay and its tributaries.<sup>2</sup> However, much work

remains to be done if the ambitious pollution reduction goals established under the EPA’s total maximum daily load program are to be achieved.



Based on our review of poultry litter land application and alternative use strategies developed over the past five years, we have concluded that many of the conclusions and recommendations in the 2010 *“Animal Manure Management in the Chesapeake Bay Watershed- New Opportunities to Meet Nutrient Load Reduction Goals”* report are still relevant and applicable today.

These and other findings we discerned through our work follow.

- In the Chesapeake Bay watershed, all sectors have a responsibility and moral obligation to reduce nutrient pollution.
- Land application of animal manure and litter in support of the nutrient needs for crop production remains the primary method of managing manure in the Chesapeake Bay Watershed. When litter can be land applied at proper agronomic levels, this remains the most cost-effective and technologically feasible method of managing manure.
- In some areas, the long history and repeated application of manure and other fertilizers on the Delmarva Peninsula has resulted in fields having phosphorous levels in excess of levels needed for successful crop growth. Soils saturated with excess phosphorous can increase nutrient runoff and leaching to the Chesapeake Bay and its tributaries.
- A number of technologies can recover nutrients and energy as value added by-products from animal manure and poultry litter but most are still expensive to implement and are in various stages of development. Nutrient and energy technologies must be fully integrated and offer economically viable solutions if they are to be commercially accepted by either the farming or the investment community.
- Successful alternatives to today’s land application of manure/poultry litter must change the material to a more concentrated, lighter by-product that is less costly to transport and apply (i.e. biochar), and/or convert the litter to a higher value product for new markets and uses, including: energy (heat, liquid fuels, electricity), nutrient products (mineral ash, organic fertilizers, compost), recycled material for bedding, or sterile ingredients for feed.
- Since the technologies for producing these value added products are not nature (or widespread), the operation and maintenance requirements for new technology waste-treatment systems are critical, and are often well

*“While the policies and practices of the past have produced some positive results, they will not meet the needs of tomorrow”*

beyond the skill set available at the farm level. Hence, there is a growing need within the animal agriculture sector to have full service providers available if the technology is to be deployed appropriately.

- Progress in land application of manure and poultry litter shows that new techniques can not only benefit crop yields, but can also make more efficient use of nutrients applied and therefore minimize nutrient loss. Research data continues to reinforce the fact that with advancements in precision agriculture equipment and technology, “nutrient use efficiency” for plants can be further improved with more precise applications, such as accounting for point to point field variations, and/or the adoption of 4R nutrient stewardship techniques—right source, right rate, right time and right place.
- Government and market incentives to offset investments, costs of maintenance of existing and new technology systems, and marketing of manure and litter byproducts are needed in order to enable agricultural producers to achieve pollution reduction goals while remaining economically viable in the long-term.
- Despite regulatory concerns, moderate growth of the poultry industry continues on the Peninsula. A trend to more organic production, larger houses with larger animals is emerging.<sup>3</sup>

### Barriers to Forward Progress

---

Over the course of the project, we identified a number of barriers that are impeding increased adoption of practices and technologies that can add to agricultural nutrient pollution. Chief among these are:

#### Fear and Erosion in Trust

Incomplete and/or outdated data documenting the scope, scale and location of poultry related nutrient pollution and the proliferation of inconsistent or nonaligned federal and state agricultural nutrient pollution regulations have driven many farmers to believe that politics rather than sound science are driving land management policy decisions. Many feel that the significant progress they have achieved over the past decade in controlling erosion, reducing inputs, and managing litter to mitigate environmental impacts, has not been recognized or given appropriate credit. Farmers and growers have a proud tradition of being stewards of the land. They are frustrated that their positive contribution to the

environment is not viewed more positively by environmentalists and some policy makers. On the positive side, consensus appears to be growing among environmental stakeholders in

the watershed that sustainably managed farms are far better for the Bay than commercial land development.

### Incomplete Data & Geographic Characterization

Ongoing concern about nutrient levels across the Chesapeake Bay Watershed has led many to believe that a better approach is needed to quantify nutrient levels, identify areas of excess phosphorous concentration and to find ways of achieving mass balance. While most are in agreement that mass balance calculations are the key to managing nutrients, additional research and analysis work is needed to help the Delmarva Peninsula evolve to become regionally neutral in importing and exporting nutrients.

Of significant concern and importance is the accuracy of the Chesapeake Bay Program's model and estimates of the amount of phosphorous coming from the poultry industry. A widely held industry view is that current data being modeled does not accurately reflect the number of birds or the amount of poultry litter that is being produced, and therefore misrepresents the actual concentration of phosphorus on the Delmarva Peninsula. It also does not capture and factor the benefits of conservation best management practices that are being voluntarily



adopted by producers. Fortunately, the Chesapeake Bay Program re-evaluated the current model and recently approved a series of recommendations from a team of state agriculture department, Land Grant University and poultry industry representatives, designed to better estimate poultry litter production on the Peninsula. It is our understanding that EPA plans to begin incorporating these new estimates into the Chesapeake Bay Program model beginning in 2016. Like all models, the Chesapeake Bay model is limited by the quality and availability of the data. For this reason, it is incumbent on producers to provide quality data so their conservation and nutrient reduction contributions can be counted.

In site-specific areas or at the farm level, approved nutrient management plans, together with soil phosphorous levels, are used to determine application rates. Unfortunately, verified data is not readily available on a regional basis to determine how much and how efficiently litter can be land applied locally, and whether poultry litter requires redistribution and transport to areas in need of nutrients to achieve the regional balance.

### Slow Evolution of Alternative Use Technologies

Over the past five years, a variety of alternative technologies have been evaluated for converting manure and litter into value added products. The categories of greatest potential and possible net return on investment include:



- nutrient use (organic fertilizer, compost, biochar etc.);
- energy (biogas, heating oil, electricity, heating/cooling applications); and
- water re-use and management (flushing, irrigation, animal watering needs).



AgriRecycle, LLC, Seaford, DE

In the nutrient use arena, Perdue built a large-scale facility in Seaford, Delaware to capture and recycle nutrients from poultry litter. While the AgriRecycle facility has demonstrated its capability of producing a commercial fertilizer product, the facility has been unable to operate in a way to take advantage of its full production capacity and be economically viable.

In the manure-to-energy arena, scale matters. We found that the trend that is emerging for alternative uses of poultry litter is that larger projects tend to be better matched for technologies that generate electricity that can be sold into the

grid, while smaller scale projects (i.e. farm scale) are better suited for technologies which can meet the heating needs of poultry houses. *Figure 1* shows the location and energy by-product of the demonstration projects previously tested, planned for installation or operating today in the Chesapeake Bay Watershed.

<b>MANURE TO ENERGY OPERATIONS</b>		
<b>Location</b>	<b>Farm-Technology Supplier</b>	<b>Energy Recovery/Byprodu</b>
<i>1-Dorchester County, Maryland</i>	<i>Murphy Farm – BHSL</i>	<i>house heat/cooling</i>
<i>2-Lititz, Pennsylvania</i>	<i>Flintrock Farm – Engenuity</i>	<i>house heat</i>
<i>3-Milford, Pennsylvania</i>	<i>Mac Curtis Farm – Total Energy</i>	<i>house heat</i>
<i>4- Port Republic, Virginia</i>	<i>Riverhill Farms – LEI Bio-Burner</i>	<i>house heat</i>
<i>5-Lancaster, Pennsylvania</i>	<i>Earl Zimmerman – Total Energy</i>	<i>house heat</i>
<i>6-Strasburg, Pennsylvania</i>	<i>Mark Rohrer – Global Refuel</i>	<i>house heat</i>
<i>7-Wardensville, West Virginia</i>	<i>Frye Poultry – Coaltec Gasifier</i>	<i>house heat&gt;biochar</i>
<i>8-Ft Seybert, West Virginia</i>	<i>Mike Weaver Farm – Global Refuel</i>	<i>house heat</i>
<i>9-Pocomoke City, Maryland</i>	<i>Millennium Farms – Planet Found AE</i>	<i>100 KW elec gen</i>
<i>10-Gettysburg, Pennsylvania</i>	<i>Hillandale Farms – Energy Works</i>	<i>3.25 MW elec gen</i>

Figure 1

Significantly, farm scale projects in the watershed have been sponsored and supported with strong collaboration, and stakeholder funding from the National Fish and Wildlife Foundation, USDA, nonprofit organizations and key landowners. Without this financial support, the emergence and advancement of these technologies for on-farm poultry applications would not be possible.

Today, multiple technology vendors are competing with different systems designed to meet house heating

needs at poultry farms, and displace propane use. Through the dry heat offered by these systems, projected improvements in bird health and feed conversion rates may be realized.

Few anaerobic digestion (AD) processes have been advanced for treating poultry litter, as these processes are more typically employed on dairy farms where storage and handling of wetter forms of manure is routine. One project worth noting is the Maryland grant funded effort at Millennium Farms in Pocomoke City. Since nutrients are not destroyed in the digestion process, this system hopes to capture energy and extract phosphorous, leaving the residual nitrogen and potassium to be safely recycled on local farmland.

Our bottom line conclusion: technology continues to develop slowly and is emerging based on economies of scale and return on investment.

### Inadequate Investments in Research, Demonstration and Monitoring

Capturing the steep learning curve in alternative uses of manure and litter requires thorough monitoring and credible third party involvement. Extracting valuable information during any demonstration project is very important and is more credible when the data provided is farm scale and is not provided solely by the vendor. It is also helpful when the academic community, the network of regulatory entities, and all critical

stakeholders work closely together to get a complete data set that is deemed important. Unfortunately, little of this type of collaboration is happening today on Delmarva, especially with regard to production oriented research in high-yield

*“Technology continues to develop slowly and is emerging based on economies of scale and return on investment”*

*“On-farm project demonstrations, progress reports and on-site visits remain powerful learning experiences for farmers”*

environments that contribute to higher nutrient removal rates from cropping systems.

Today's reality of basic and applied research funding doesn't promote or focus development along a continuum (i.e. from lab or bench scale testing through a pilot scale to full scale on-farm demonstrations). Yet, on-farm project demonstrations, progress reports and on-site visits remain

*“Rules governing state manure and litter transport assistance are not uniform creating a complicated maze of bureaucratic obstacles for transporting litter”*

powerful learning experiences for farmers. Unfortunately, the avenues for communicating and managing this information are not widespread. One institution that is attempting to bring more information about manure management techniques is the University of Nebraska at Lincoln (UNL) – through its Poultry Learning Center newsletter and on line programs. Lacking a formal clearinghouse in the Chesapeake Bay Watershed, several manure-to-energy projects will be evaluated with the

help of the Maryland Finance Center.<sup>4</sup> The Center plans to document technical, environmental and financial feasibility of these projects and will post results on the UNL websites.

### Regulatory Incoherence

Within Delmarva, growers and haulers are aware that regulation and policy are not uniform from state to state, even though they all operate in the same region. For example, within the region, the number of days litter piles must be covered varies from 14-90 days depending on the size of the operation and the state that you are in.

Unfortunately the nutrient management planning requirements, as well as eligibility requirements and rules governing state manure and litter transport assistance are not uniform, thus creating a complicated maze of bureaucratic obstacles for responsible land application of poultry litter. The net effect of non-uniform and changing regulatory environments is financial uncertainty and unnecessary complexity for grain farmers, poultry growers, litter haulers, and integrators in managing nutrients associated with poultry production.

### Win-Win Pathways for Agriculture and the Bay

---

Despite the significant progress that farmers and the poultry industry have achieved to date in reducing pollution from poultry litter on the Delmarva

Peninsula, we believe that more must be done to meet the nutrient reduction targets that have been established for the agricultural sector. To achieve these goals, producers, industry leaders, value chain and



government officials need to work smarter. Strengthened and improved communication, coordination and collaboration amongst these stakeholders are critically needed. While the policies and practices of the past have produced some positive results, they will not meet the needs of tomorrow, where an ever growing population in the watershed will further threaten the economic viability of the agriculture sector, and the multiple economic and environmental contributions it provides.

The Delmarva Peninsula is a unique region and ecosystem defined in large part by its agriculture economy, and the environmental and aquatic attributes of the bay and its tributaries. To improve the delivery of environmental and economic values from the land, we recommend moving away from “silo management”, where jurisdictions operate independently and manage for singular objectives. A new forum is needed for collaboration; one where public and private sector stakeholders committed to addressing nutrient pollution from animal agriculture operations can work across county, state and watershed boundaries and design and deploy better integrated and more uniform policies,

programs and projects. In short, we believe that a new way forward is needed for addressing water quality challenges from animal agriculture operations. The new way forward that we are recommending embraces integrated and landscape scale strategies for managing nutrients, and utilizes economic incentives in the form of ecosystem service payments to compensate farmers for the environmental services they generate on their working farms.

*“We believe that a new way forward is needed for addressing water quality challenges from animal agriculture operations”*

## Recommendations

---

As members of the Delmarva Land and Litter Work Group, we recommend that efforts to address nutrient pollution associated with poultry production on the Delmarva Peninsula should remain focused primarily along two pathways:

a) *Responsible land application of animal manure and litter; and*

b) ***Alternative uses and markets for manure/poultry litter.***

In support of these efforts we have identified five major recommendations for the consideration of policy makers, government officials, farmers, chicken growers,

poultry integrators, agribusiness value chain partners, universities, conservationists and environmentalists, other Chesapeake Bay stakeholders and land management project funders. If implemented, we believe that significant progress could be achieved in meeting the nutrient reduction goals that have been established for the agricultural sector. The end result would be pathways for land management that will improve the health and productivity of agriculture and the Bay, while strengthening the economy that preserves and protects the region's rural cultural heritage.

### **1. Create and Support a Landscape Scale, Multi-Stakeholder Leadership Platform for Addressing Agricultural Nutrient Pollution**

Across the country a new model is emerging for managing agricultural landscapes. Common characteristics of this model include efforts to implement

landscape-scale solutions; the forming and empowerment of

multi-stakeholder action teams and partnerships; the harmonization of policy frameworks; the establishment of financial rewards for stewardship of ecosystem services; energizing and coordinating research; and transforming and modernizing information networks.

*“The new model we are recommending is less top-down regulatory driven and more bottom-up stakeholder led”*

The new model we are recommending is less top-down regulatory driven and more bottom-up stakeholder led. It

acknowledges the reality that farmers must plan and manage land sustainably to meet economic, social and environmental objectives. Under this model, coalitions composed of farmers, land managers, scientists, environmentalists and regulators work together to forge consensus on integrated policies, practices and projects at a landscape scale that will result in land being sustainably managed to produce food, feed, fiber, and energy while enhancing biodiversity, improving water quality and protecting and improving critical environmental resources.

Support for this type of public-private stewardship partnership model is growing, as evidenced in the passage of the 2014 Farm Bill, where a new Regional Conservation Partnership Program was established to support conservation projects designed by local partners. Of particular importance to us, the Chesapeake Bay Watershed is one of eight critical conservation areas established under the program. While the management model we envision would benefit from direct government support, private sector endorsement and financial investments will be required.

**Proposed Action:** We propose that farm, agribusiness, environmental, academic and government leaders involved in animal manure and poultry litter management come together to participate in a dialogue around how such a new model might work on Delmarva, along with how it could be formed, resourced, supported and replicated in other areas. The initial areas of focus and deliverables for the dialogue should include:

- a vision and mission statement
- guiding principles to facilitate the effective functioning of the coalition;
- a set of desired economic, environmental and social outcomes;
- initiatives that can produce win-win outcomes for agriculture and the bay;
- mechanisms for sharing information, creating centralized and searchable databases and inventories of programs for addressing manure and litter challenges;
- the identification of common barriers and ways to collaborate more effectively in planning and delivering services;
- methods and mechanisms for monitoring success and measuring progress; and
- arrangements for funding and management support services.

We invite all stakeholders who share our vision and desired outcomes to join us in this dialogue and exploration of solutions that can be delivered from the land.

## **2.** [Invest in Mass Balance Research and Analysis](#)

An ongoing integrated research program that uses validated “on the ground” and regularly updated data and proven methodologies are critically needed if we are to understand nutrient levels and pathways within Delmarva.

**Proposed Action:** We recommend that the land grant universities serving the Delmarva Peninsula collaborate, in partnership with poultry integrators and other stakeholders, in designing, implementing, and financing an ongoing integrated research program to model nutrients at all levels. Such an effort might begin at the county level, factoring up-to-date data on nutrient uses by crops grown, chemical fertilizer usage, poultry production with litter/nutrient estimates and a geographic

overlay of phosphorous saturated soils that would restrict land application. While data acquisition to support this research is necessary, it must be done in a way that preserves confidentiality as producers compete against their neighbors for yields, quality, markets and the price they receive for the commodities they produce. The results of this research must be updated annually and distributed to farmers and modelers so that the Bay model and farm practices can evolve together. Updated mass balance analyses would show how much potential “surplus” litter is available for an alternative use and indicate the kind and scale of technology that should be encouraged. For some areas it may be better to encourage redistribution of litter, while other areas may require larger scale alternative use technologies.

### 3. [Support and Fund a Virtual Poultry Nutrient Management Resource and Demonstration Program](#)



Mobile pyrolysis unit that converts poultry litter to biochar and heating oil;  
Source: FPPC

As was confirmed in the 2010 *Animal Manure Management in the Chesapeake Bay Watershed* report, there are many nutrient reduction technologies and systems in various stages of development in the watershed. Many technology providers are offering partial solutions, and while some of those claims have technical merit, they are usually not substantiated in a farm environment or have not qualified with “manure” feedstock. In addition, the large majority of solution providers do not provide a fully integrated solution for the farm – an important attribute for developing an economical solution.

This finding still holds today and reaffirms the need for an objective, third party evaluation support system where new technologies and integrated solutions sets can be “piloted”, and data relative to technical and economic feasibility can be centrally gathered for use by producers and lending agencies.

#### *Proposed Actions:*

- Establish a center of excellence on the Delmarva Peninsula for ongoing nutrient management support, staffed by technical experts, practitioners, engineers and researchers. The center will support and shepherd regional demonstration of alternative use and precision agriculture technologies. Site visits and technical exchanges coordinated by the center will be third party credible, routine and cost effective.
  - Establish a clearinghouse program for information and learning so that knowledge is readily accessible and past lessons learned are leveraged.
  - Utilize a public/private sector funding mechanism to support the clearinghouse and demonstration programs for pilot scale deployment of manure and litter technologies.



#### **4. Standardize Regulations for Manure and Litter Storage, Transport and Use**

Throughout our information gathering phase of this project, we consistently heard from farmers, poultry producers and litter haulers that lack of uniformity in eligibility requirements and rules governing state manure and litter transport assistance programs on Delmarva were a major challenge in relocating litter to areas where its high nutrient value could be utilized without impacting water quality. The following recommendations are offered to help streamline and standardize programs, thereby facilitating the transport of litter away from areas with phosphorous saturated soils.

**Proposed Action:** We recommend the Maryland, Delaware, Virginia and Pennsylvania Departments of Agriculture work with a multi-stakeholder leadership platform in evaluating the benefits of harmonizing programs or establishing and jointly funding a regional manure and litter transport, storage and use program. Key areas of focus for this examination should include ways to:

- Adopt a goal of continuous improvement in nutrient use efficiency to encourage proper use of nutrients and less loss to the environment.
- Improve uniformity of regulations and work to eliminate different regulations across the region (state to state) for storing, transporting and using manure and poultry litter.
- Incentivize and fund precision application practices, technologies and equipment that can improve the placement and timing of nutrient applications.
- Simplify data collection and streamline transport programs.
- Provide indemnification protection for those who properly store, transport and apply manure and poultry litter.
- Encourage common biosecurity measures to reduce risk of contamination and the spreading of disease when litter is moved from individual farms to centralized collection facilities.

- Allow for in-field storage through the establishment of best management practices for constructing and locating piles.

## 5. Create and fund financing mechanisms that support bundled technologies

Because most on-farm or community scale alternative use technologies for manure and litter remain in a pilot scale phase of development, the need still exists for public and private sector programs to finance the deployment of bundled technologies and processes that deliver both nutrient reduction and energy recovery services along with value added end products. Towards this end, we recommend the following initiatives be undertaken.

### *Proposed Actions:*

- Find and establish financing mechanisms (e.g. cost sharing, grants, commodity check-offs, low interest loan and loan guarantee programs) for advancing improved manure and litter solutions involving land application and alternative use of manure and litter.
- Prioritize competitive research funding, practice application and extension work supporting bundled technologies that concentrate and deploy nutrients effectively and are fully integrated into systems that link processes, byproducts, income and benefits for the farmer.
- Amend agricultural conservation programs to allow equipment that incorporates litter into the soil to be eligible for cost sharing.
- Leverage interest and generate supporting funds from industry.
- Develop an educational program on the value of litter to encourage its use in areas where it could be used without causing nutrient pollution.
- Analyze appropriate scale of technologies based on development of well-vetted environmental and economic considerations.



## Path Forward

---

Through our work together exploring new ways to abate pollution associated with the storage, transport and land application of poultry litter on the Delmarva Peninsula, we have come to appreciate the reality that environmental, economic, energy and quality of life goals are all interconnected. Rather than pursuing each separately using our own individual lenses to assess options and measure progress, a better way forward would be for our communities to come together, forge consensus on the future we seek, and collaborate in actions to achieve shared goals. Maintaining a healthy bay and a vibrant agricultural economy in ways that support both will require a mammoth undertaking characterized by fresh thinking, a willingness to experiment with new approaches and the formation of trust relationships with communities that for decades have too often pursued win-lose, rather than win-win strategies. Aided by advancements in technology and our commitment to the stewardship and wise management of our natural resources, we are prepared, in a subsequent phase of work, to provide catalytic leadership in solving poultry related nutrient pollution problems on Delmarva. We invite other partners to join us in addressing this epic challenge.



## Acknowledgments

---

*The Delmarva Land & Litter Work Group is indebted to the following organizations, companies and agencies for their frank comments and thoughtful recommendations. We appreciate both their candor and their sincere desire to create and nurture win-win pathways for agriculture and the Bay.*



**A** Allen Harim; Amick; **C** Centennial Farms; Center for Climate and Energy Solutions; Chesapeake Bay Commission; Chesapeake Bay Foundation; Chester River Association; **D** Deerfield Farms; Delaware Department of Agriculture; Delmarva Poultry Industry, Inc.; **E** Ellis Farms; Environmental Integrity; **F** Fanttell Farms; **H** Hatcher Communications; Hughes AgroEcology Center; Hughes AgroEcology Poultry Work Group; **J** Jones Family Farm; **K** Keith Campbell Foundation for the Environment; Kellogg Foundation; **M** Malone Poultry Consulting; Maryland Agriculture Commission; Maryland Agriculture Associates; Maryland Association of Soil Conservation Districts; Maryland Chesapeake Bay Cabinet; Maryland Department of Agriculture; Maryland Department of the



Environment; Maryland Farm Bureau Federation; Maryland Grain Producers; Maryland League of Conservation Voters; Maryland State Soil Conservation Committee; MidAtlantic Farm Credit; Mountaire; **P** Perdue Farms Inc.; **S** Sustainable Chesapeake **T** The Nature Conservancy; Tyson Foods, Inc.; **U** University of Delaware; University of Maryland; **W** Waterkeepers Chesapeake; WestRhode Riverkeeper.



*This self-directed project was funded through a grant from the Keith Campbell Foundation for the Environment. The project was facilitated and managed by Natural Resource Solutions, LLC, a conservation and natural resource management consulting and coalition building firm, located in Lutherville, Maryland*

**Delmarva Land and Litter Project Leaders 2014-2015**

<p>Chip Bowling Grain Producer Newburg, MD</p> <p>Bill Brown Poultry Extension Agent Georgetown, DE</p> <p>Allen Davis Grain and Poultry Producer Galena, MD</p> <p>Ray Ellis Ellis Farm Inc. Millsboro, DE</p> <p>Bob Frazee MidAtlantic Farm Credit Westminster, MD</p> <p>Jim Hanson Dept. of Ag. &amp; Resource Economics University of MD, College Park, MD</p> <p>Bobby Hutchison Grain Producer Cordova, MD</p> <p>Sean Jones Milk Producer Massey, MD</p> <p>Drew Koslow Choptank Riverkeeper Easton, MD</p> <p>Bud Malone Poultry Consultant Princess Anne, MD</p>	<p>Beth Sise Mountaire Farms Millsboro, DE</p> <p>Andrew McLean Poultry Producer Sudlersville, MD</p> <p>Bob Monley Technical Consultant. Lebanon, OH</p> <p>Michael Phillips Perdue Farms Salisbury, MD</p> <p>Jennifer Rhodes Senior Extension Agent Centreville, MD</p> <p>Hans Schmidt Grain Producer Sudlersville, MD</p> <p>Paul Spies Chester River Association Chestertown, MD</p> <p>Mike Twining Willard Agri- Service Worton, MD</p> <p>Ernie Shea (Facilitator) Natural Resource Solutions Lutherville, MD</p> <p>Ethan Gilbert Natural Resource Solutions Lutherville, MD</p>
---	--

---

## References

---

<sup>1</sup>Natural Resource Solutions. *Animal Manure Management in the Chesapeake Bay Watershed, New Opportunities to Meet Nutrient Load Reduction Goals*.

December 1, 2010.

<http://www.25x25.org/storage/25x25/2014/cbll%20animal%20manure%20management%20in%20the%20chesapeake%20bay%20watershed%20final%20121310.pdf>.

<sup>2</sup>Chesapeake Bay Program:

Chesapeake Bay Program Reducing Phosphorus Pollution 1985-present.

[http://www.chesapeakebay.net/indicators/indicator/reducing\\_phosphorus\\_pollution](http://www.chesapeakebay.net/indicators/indicator/reducing_phosphorus_pollution).

Chesapeake Bay Program Reducing Nitrogen Pollution 1985-present.

[http://www.chesapeakebay.net/indicators/indicator/reducing\\_nitrogen\\_pollution](http://www.chesapeakebay.net/indicators/indicator/reducing_nitrogen_pollution).

Chesapeake Bay Program Reducing Sediment Pollutions 1985-present.

[http://www.chesapeakebay.net/indicators/indicator/reducing\\_sediment\\_pollution](http://www.chesapeakebay.net/indicators/indicator/reducing_sediment_pollution).

<sup>3</sup>Delmarva Poultry Industry, Inc. *Delmarva Chicken Production Facts 1969-2014*.

[http://www.dpichicken.org/faq\\_facts/docs/Delmarva%20Chicken%20Production%20Facts%201969-2014.pdf](http://www.dpichicken.org/faq_facts/docs/Delmarva%20Chicken%20Production%20Facts%201969-2014.pdf).

<sup>4</sup>University of Maryland, Environmental Finance Center.

<http://efc.umd.edu/manuretoenergyinitiative.html#.VbaTB6RVhBc>

### Photo Credits

Chesapeake Bay Commission, Chesapeake Bay Program, Delmarva Poultry Industry, Inc., Jane Thomas of the University of Maryland Center for Environmental Science

**Agenda Brief:** Communications and Marketing Committee (CMC)

**Date:** November 16, 2015

**Presenter:** Richard Rhodes III/Daniel Rossi

**Background Information:**

1. Committee Membership:

<b>Voting Members:</b>			
Chair (CES)	Scott	Reed	West
Incoming Chair (ESS)	Richard	Rhodes III	Northeast
Past Chair (AHS)	Nancy	Cox	South
AHS Representative	Wendy	Wintersteen	North Central
CES Representative	Tony	Windham	South
ESS Representative	Daniel	Scholl	North Central
AHS Chair	Walter	Hill	1890
ECOP Chair	Delbert	Foster	1890
ESCOP Chair	Shirley	Hymon-Parker	1890
ACOP Representative	Cameron	Faustman	Northeast
ACE Representative	Faith	Peppers	South
CARET Representative	Connie	Pelton Kays	North Central
APLU CGA Representative	Dustin	Bryant	South
Nat'l Impacts Database	Sarah	Lupis	West
<b>Non-Voting Members:</b>			
kglobal Liaison	Darren	Katz	
Cornerstone Liaison	Hunt	Shipman	
AHS ED/Admin. Rep	Ian	Maw	
ECOP ED/Admin. Rep	Jane	Schuchardt	
ESCOP ED/Admin. Rep	Daniel	Rossi	

## 2. Meetings

- The Communications and Marketing Committee (CMC) met by conference call on October 22, 2015.
- The next scheduled quarterly conference call is January 28, 2016
- The CMC will have a face-to-face meeting on March 6, 2016 at the CARET/AHS meeting in Alexandria, VA.

## 3. Updates

- The leadership of the CMC will rotate following the APLU meeting. Rick Rhodes III will become chair and Scott Reed will serve as Past Chair. An AHS representative, yet to be confirmed) will serve as the Incoming Chair.
- kglobal has released its third quarter report (<http://nera.rutgers.edu/cmc/kglobalOct2015Report3rdQ.pdf>). A separate Executive Summary (<http://nera.rutgers.edu/cmc/kglobalQ3ExecSummary.pdf>) is also available for those who just need a broader overview of activities. The message testing study conducted last year is providing specific guidance in targeting audiences through both traditional and digital media. Three Twitter Town Halls have now been conducted – Montana State University, the Northeast Integrated Pest Management Center and the National Extension Directors and Administrators.
- kglobal will be providing a proposal to update last year's message testing study in a response to a request from the CMC. Funding will need to be secured.
- The CMC has approved a 2016 Plan of Work (see attached). The POW establishes four goals and specific strategies for each. The CMC will be working on implementing the POW over the next several months.
- The CMC is proposing a strategy for reaching out to presidential candidates to explain the value of the LGU's. The CMC chair will be meeting with the chairs of the PBD, BAC and CLP to discuss this proposal.

**Action Requested:** For information only.



# Communications and Marketing Project

## 2016 Plan of Work

*Approved by CMC on October 22, 2015*

### **Background:**

The Communications and Marketing Project (CMP) is a coordinated and targeted educational effort to increase awareness of the value of Land-grant University agricultural and related programs, Agricultural Experiment Stations (AES) and Cooperative Extension Services (CES). More specifically, it supports the creation of unified messages and targeted educational efforts to raise awareness, understanding and appreciation of the impacts and outcomes of federal funding through competitive grants and capacity lines to the state agricultural experiment stations and Cooperative Extension services. The stakeholders of this effort are our state citizens, community leaders, opinion makers and institutional allies, with close connections to identified congressional decision makers.

Two consulting firms, kglobal and Cornerstone Government Affairs, are contracted to lead this effort. These firms assist to identify key targets (thematic areas of interest to stakeholders) and develop appropriate corresponding strategies to focus communication and education efforts. kglobal then implements targeted media strategies utilizing Land-grant University and stakeholder assets. These strategies include traditional media, the use of grassroots engagement and grass-tops advocacy, and digital and social media approaches (Agriculture is America website [<http://agisamerica.org/>], Twitter, Facebook and YouTube).

The CMP is supported by three sections of the APLU Board on Agriculture (BAA): Administrative Heads (AHS), Cooperative Extension (CES) and Experiment Station (ESS). The annual CMP budget, \$400,000 is equally shared by AHS, CES and ESS.

The Communications and Marketing Committee (CMC) oversees and guides the CMP. The CMC is policy-making body that oversees the development, implementation and effectiveness of the targeted educational efforts, including coordination with the APLU Board on Agriculture Assembly, kglobal and Cornerstone Government Affairs. The CMC has a standing Plan of Work Committee which prepares an annual statement of work that articulates clear and focused goals and strategies for the coming year.

**Goals:**

The CMC will focus on the following goals for 2016:

1. Enhance the effectiveness of the CMC by providing clear guidance and oversight to CMP
2. Support and contribute to unified system messaging
3. Effectively engage institutional communications specialists
4. Promote internal advocacy within the “system” for the communications and marketing project

**Strategies for goal implementation:**

Below we outline the strategies for achieving the 2016 goals. The CMC recognizes that any communications efforts are constantly evolving and responding to changing external conditions. Hence, the specific strategies identified below may have to be adjusted accordingly.

Goal 1: Enhance the effectiveness of the CMC by providing clear guidance and oversight to CMP

- 1) Restructure CMC meetings to ensure timely provision of advice to kglobal on:
  - Different interests within the system to be promoted
  - Different types of programs to be promoted
  - New programs that might be of interest to promote
  - Different impacts and outcomes that should be promoted
  - Unique relationships with media, members of Congress or Congressional staff
  - The internal politics of the system
- 2) Regularly review and evaluate metrics and overall results of kglobal communications efforts as presented in quarterly kglobal reports, provide feedback to kglobal, and provide updates to deans and directors. (Any assessment of communications and marketing efforts should not be confused with or focused on advocacy.)
- 3) The CMC in cooperation with kglobal will provide the deans and directors with a quarterly executive summary of the communications and marketing efforts.
- 4) Solicit input from Cornerstone personnel on effectiveness of communications efforts.
- 5) Continually evaluate messages and delivery mechanisms through qualitative and quantitative research.
- 6) The CMC will commission kglobal, on an as needed basis, to conduct periodic message testing surveys to ensure overall effectiveness of the project.

Goal 2: Support and contribute to unified system messaging

- 1) The CMC will develop ways to coordinate activities with the BAA and its committees including the Budget and Advocacy Committee (BAC) and the Committee on Legislation and Policy (CLP). While the system's educational and advocacy efforts are separate, it is critical that the system messaging is unified and coordinated.
- 2) Continue to focus the communications efforts during 2016 on the themes of *Health and Nutrition* and *Water Security*.
- 3) By November 1 solicit the sections (AHS, CES and ESS) and the BAC for confirmation of continuing current communications themes or consideration of new themes (identified by the sections) for 2017.
- 4) Monitor the new BAA Process for Advancing New Budget Initiatives to identify potential theme and targets for educational activities.
- 5) Engage kglobal to assess the resonance of the identified issues through appropriate methodologies including message testing surveys.
- 6) The final decision on thematic areas of focus will be made through a consensus building process.

Goal 3: Effectively engage institutional communications specialists

- 1) In cooperation with the Regional Executive Directors/Administrators, annually survey institutions to ensure that kglobal has a current database of institutional points of contact including: deans, administrators, and directors, their assistants, communications specialists and government affairs specialists.
- 2) Identify opportunities for added value by fully engaging communicators upfront as communications targets and strategies are developed.
- 3) Collaborate with kglobal and Cornerstone to develop sessions at the annual joint CARET/AHS meeting and at any New Deans/Directors/Administrators Orientations programs to stress the importance of engaging institutional communications specialists in the CMP efforts.
- 4) Send periodic reminders to encourage institutional leadership and communications specialists to:
  - Continue to submit impact statement to the Land-grant Impacts Database
  - Notify kglobal of important institutional events/activities with broader communications potential
  - Consider co-hosting with kglobal Twitter Town Halls

Goal 4: Promote internal advocacy within the "system" for the communications and marketing project

- 1) Communicate regularly with deans, administrators, and directors, their assistants, communications specialists and government affairs specialists on the activities of the communications and marketing project (referred to as constituencies).

- 2) On a quarterly basis, share project metrics including message testing results with deans and directors.

Solicit input from deans and directors on the project.

**Item 10.0 Science and Technology Committee**

**Presenters: Marikis Alvarez and Jeff Jacobsen  
For information only**

**Committee Members:**

<p><b>Chair:</b> Marikis Alvarez (ARD)</p> <p><b>Delegates:</b> Larry Curtis (WAAESD) David Thompson (WAAESD) Joe Colletti (NCRA) Deb Hamernik (NCRA) Cameron Faustman (NERA) Adel Shirmohammadi (NERA) Nathan McKinney (SAAESD) Harald Scherm (SAAESD) John Yang (ARD) Ed Buckner (ARD) Chair Elect tbd (WAAESD)*</p> <p><b>Executive Vice-Chair</b> Jeff Jacobsen (NCRA ED) Chris Hamilton (NCRA AD; Recorder)</p>	<p><b>Liaisons:</b> Terry Nelsen (ERS) Cliff Gabriel (OSTP) Adrianna Hewings (ARS) Frank Zalom (Pest Mgmt Subcom) Edwin Price (ICOP) Scott Loveridge (Social Sci Subcom) Parag Chitnis (NIFA) Denise Eblen (NIFA)</p> <p><b>*Chair elect</b></p>
--	--

**General –** The Science and Technology Committee (S&T) has regular monthly calls on the third Monday of each month. A face-to-face meeting was conducted on the Thursday morning after the ESS/SAES/ARD meeting in Charlotte, NC. All meeting agendas and minutes are posted at: <http://escop.ncsu.edu/ViewCommittees.cfm?comid=5>. S&T reviewed the ESS goals and processes for this Standing Committee. In addition, an Operating Guidelines document was created, modified and approved to codify processes going forward (attached). Membership to S&T is being updated, particularly with the Liaisons to the Committee.

**Report Discussions –** The Riley Foundation Report on a unified message for agricultural research and the AGrEE Report on Research & Innovation: Strengthening Agricultural Research were evaluated. In general, S&T was supportive of these efforts which would potentially enhance the potential for new funding into existing programs, as well as through partnerships with other federal agencies and with the private sector. S&T fully supported efforts to strategically focus our collective activities with messaging and partnering with the appropriate entities and organizations. S&T was not in favor of the proposal to increase Congressional oversight through more hearings and reaffirmed the support of capacity funds, in contrast to the stated position in the AGrEE Report.

Each of these Reports had elements that addressed the need for open access to publications and, in particular, data. S&T discussed this important topic, reviewed the status at the respective institutions and with NIFA officials. All understand that this is a mandate that is in progress both at the State and Federal levels, yet is an opportunity to enhance and grow scientific advancements from all sources of funding. In that the suite of open access approaches are very dynamic and fluid, at the present, S&T is viewing this with a go slow approach to ensure that limited resources at the State and Federal level are used effectively and efficiently.

The Farm Bill mandated provisions for Commodity Boards and the self-declaration of Center of Excellence were openly discussed as they are active elements of NIFA efforts. Eligible Commodity Boards have been certified and are in discussions with NIFA for inclusion in future RFAs. The current RFAs requests regarding Center of Excellence (COE) declarations in each competitive grant was reviewed. This is a practice that is part of the current grant review process. Data is being collected by NIFA from the activities of grant review Panels as they conduct their reviews and will be presented at a later date when sufficient data is available. There are numerous criteria for consideration and, if proposers are successful in their COE representation, proposals will be advanced in a tiebreaker approach.

**National Integrated Pest Management Coordinating Committee (NIPMCC)** – The NIPMCC met in Washington, DC October 6-7, 2015. The NIPMCC is a subcommittee of S&T (supported by ESCOP and ECOP) and is following through with its more formal status with operating guidelines and membership. Jeff Jacobsen, Mike Harrington and Robin Shepard were in attendance. More information will be forthcoming as NIPMCC develops its agenda.

**Experiment Station Section Science  
and Technology Committee  
Operating Guidelines  
August 19, 2015**

**Purpose**

The ESCOP Science and Technology (S&T) Committee is charged with promoting and enhancing science and technology in the Land-grant university system. The committee will assist ESCOP to identify future directions and anticipate and respond to research needs and opportunities for funding. The committee will assist in linking science and technology programs to multistate and national research initiatives. The committee will recommend how ESCOP will respond to reports, recommendations, and planning documents from the national science community. This committee will provide guidance to ESCOP strategic planning and priority setting.

**Membership**

- Chair from one of the five SAES/ARD regions
- Two representatives from each of the five SAES/ARD regions
  - Incoming Chair
- One ED (non-voting) to serve as executive Vice-Chair and to assist the Chair
- Non-voting representatives from the following organizations:
  - NIFA
  - ARS
  - ERS
  - Chair of the Social Science Subcommittee
  - ESCOP Co-Chair of the Pest Management Strategies Subcommittee
  - Other organizations including OSTP, other COPS and other federal agencies as appropriate (i.e., NASA, EPA, DOE)

Members serve four year terms and may be reappointed indefinitely. The term of Chair, Incoming Chair and Past Chair are for two years each.

**Organization and Function**

The S&T may meet in person once a year associated with the Fall ESS Meeting and Workshop or as the need arises. Other in-person meetings can be scheduled by the Chair as necessary. The S&T will meet by teleconference monthly to quarterly for S&T work plan updates, coordination, issue or problem solving, selecting the ESS National Excellence in Multistate Research Award winner and associated business. Meeting agendas and support materials will be provided, after consultation with the Chair, to the S&T Committee in advance of the teleconference or in-person

meetings. Minutes will be taken from each teleconference, approved at the next S&T meeting and posted on the ESCOP website.

Annually, during late May and early June, the S&T will receive and evaluate the regional nominations for the ESS National Excellence in Multistate Research Award. The S&T Committee will individually rank the nominees and a summary will be provided to the Chair for teleconference discussions to select the top Multistate project. This recommendation is provided to ESCOP for their evaluation and ratification. The S&T will announce the winner to ESS membership and APLU before the end of June.

It is expected that programmatic and policy decisions are to be made by consensus. If necessary, formal decisions are to be determined by simple majority of a quorum of S&T members.

The S&T may create ad hoc work groups to assist with special tasks or problem solving, as needs are addressed by ESCOP. The work groups will be responsible to the S&T.

### **Officers**

The Chair of the S&T will be a member of one of the five SAES/ARD regions. The Chair serves for two years. The position will rotate among the sections in same order as the ESCOP Chair (NC, S, ARD, W, NE).

The incoming Chair will discharge the duties of the Chair, such as presiding over meetings when the Chair is not available and guide the work of the S&T. The Regional Office may also facilitate the meetings as the need arises.

### **Quorum**

For purposes of doing business, a quorum shall consist of a simple majority of the duly constituted members at any officially called meeting for which written notice is sent in advance of the meeting. A simple majority of the quorum resolves all issues.

### **Parliamentary Authority**

The emphasis in all S&T meetings shall be on orderly process to achieve an objective decision by those present and voting. Should there be a parliamentary challenge, it shall be answered by referring to the most current edition of Robert's Rules of Order.

### **Amendments**

These operating guidelines may be amended at any business meeting of the S&T provided the proposed amendment has been sent to all members in advance of the meeting, and the question is passed by a simple majority of a quorum of the voting members present at that meeting



**Agenda Item:** National Impact Database

**Committee Presenters:** Bill Brown and Eric Young

**Background:**

The National Impacts Database (<http://landgrantimpacts.tamu.edu/>), is continuing to be populated by research and extension impacts. As of October 27 there were 482 research impacts and 1004 Extension impacts. NIFA is using the database more frequently to access information about impacts of NIFA funded research and Extension, therefore it's **VERY** important to select the appropriate funding sources when entering impact statements, particularly the capacity lines.

A group of writers, editors and designers from each region have volunteered to meet together for 2-3 days in a central location to produce compiled national impact statements on a timely topic in each of the six focus areas of the database. The group requested financial support for this work session from ESCOP and ECOP at the July meetings. The team would include 4 writers, 4 editors and 1 designer. A total of \$10,000 was requested to offset travel, meeting and production expenses. This proposal was discussed by ESCOP, but was not approved due to uncertainty about how the product would be useful to the directors or ESS in general. ECOP did approve funding their portion of the support. The writing group subsequently submitted a more detailed proposal (see next page) in late July to Bob Shulstad and he asked the Communication and Marketing Committee to review it and for ESCOP to revisit the request at the meeting in November.

The group has since indicated that these impact stories and fact sheets will be integrated documents showing overall impact on a national or regional basis from multiple institutions working on different aspects of the same general issue, like water quality. They will be featured on the impacts website and available for download for administrators and communicators to use with media or for legislative relations purposes. They will also serve as engaging stories to bring people to the National Impact Database. The individual sheets will highlight the national scope of projects being conducted at land-grants or they can be customized depending on who the information is for. Their main goal is to get compelling stories constructed for the site that will show how the system is positively impacting productivity, the economy and the environment that will draw people into the content of the database.

The group hopes to have drafts of these documents available for the ESCOP meeting, which will help give a better picture of what the project's output will be.

**Action Requested:** Reconsider and approve/disapprove \$5,000 of ESCOP funds to support the writing group's travel, meeting, and production costs.

## **Proposal for content development for the public portal of landgrantimpacts.org**

### **Situation:**

The National Impact Database is being populated with impact data from throughout the land-grant system. The data needs to be translated into interesting, powerful stories and fact sheets that can be distributed to key audiences through the Land-grant Impacts website.

A group of highly respected writers, editors and designers from each region have volunteered to be a part of the working group to develop the web portal content and downloadable materials need to make this project productive. However, carving time to work at a distance is proving too slow for the progress we need to make to develop effective tools for informing Congress and national media.

### **Proposed solution:**

We recommend returning to the former system of bringing the content team together for 2-3 concentrated days in a central, cost-effective location to produce the needed templates and materials. The group requests financial support for this initial work session.

### **Expected outcomes:**

1. Compelling stories based on and leading back to the impact statements in the database that demonstrate the value of the land-grant system in an engaging way. These stories will be **highlighted on the website homepage** and **pushed out through social media efforts**.
2. Fact sheets on each of the focus areas defined by the database that **can be posted as a downloadable pdf** and distributed to decision makers and media as needed. **These sheets would publicize the work in the focus areas and the other content available on the website.**

### **Budget:**

The team includes 4 writers, 4 editors and 1 designer. We request funds to offset travel, meeting and production expenses.

We request \$10,000 (\$5,000 each from ECOP and ESCOP). Funds will be used to reimburse travel expenses and production costs associated with meetings at a central, cost-effective location. Any unused funds will be held by the NID chair for future content production costs.

Item 14.0 ESCOP Diversity in Leadership Task Force Presenter:  
Karen Plaut and Jeff Jacobsen

For Information Only

### **Background**

The Diversity Task Force was created by ESCOP to explore the topic of diversity in research leadership across the Land-grant University System, to provide ideas and actions for consideration, and to supplement institutional, regional and national diversity and inclusion efforts. The focus should be primarily on enhancing diversity among the Experiment Station Directors, Research Directors, and their associates and assistants.

Key Questions that will be considered:

- ❖ How do we create diversity in ESCOP leadership and its pipeline?
- ❖ Where are we at? Where do we want to go? What does success look like?
- ❖ Are there actions and programmatic activities that might contribute to advancing this critical issue?
- ❖ What best practices could we adopt in our regional and national associations that would complement on-going efforts?

### **Membership**

The Task Force is populated with 16 people and will have Karen Plaut (Purdue University) as chair with additional directors of Ali Fares (Prairie View A&M University), Tim Phipps (West Virginia University), Jackie Burns (University of Florida) and Charles Boyer (Montana State University); College Diversity as Shannon Archibeque-Engle (Colorado State University); AHS as Doze Butler (Southern University and A&M College); Allied leader as Soyeon Shim (University of Wisconsin); ECOP as Julie Middleton (University of Missouri Extension); ACOP as Cynda Clary (Oklahoma State University); Regional Directors as Jeff Jacobsen (NCRA), Dan Rossi (NERA), Carolyn Brooks (ARD); and Regional System Administrators as Chris Hamilton (NCRA), Sarah Lupis (WAAESD), Rubie Mize (NERA).

### **Inaugural Meeting**

A conference call has been set up for December 7, 2015. A Basecamp project site has been set up that includes background resources, ESCOP diversity data, FSLI diversity data and working materials.