



HARRY R. HUGHES CENTER FOR
AGRO-ECOLOGY, INC.

Promoting Viable Farms and Forests

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February 19, 2008

MEMORANDUM

TO: Governor's BayStat Workgroup

VIA: John Griffin, Secretary
Maryland Department of Natural Resources

FROM: Harry R. Hughes, President
Harry R. Hughes Center for Agro-Ecology, Inc.

SUBJECT: Reducing Nutrients from Agriculture – Recommendations for a Future Strategy

The Board of Directors for the Harry R. Hughes Center for Agro-Ecology, Inc. respectfully submit the attached set of recommendations for a future strategy to move agriculture closer to meeting its responsibilities as outlined in the Chesapeake Bay Restoration Goals.

Passage of the Trust 2010 Fund provides a unique opportunity to not only evaluate our current strategies for nutrient reduction from agriculture, but to integrate the latest science into our future strategies. These recommendations should be viewed as a framework to begin a dialog. In that context, we would be honored to present our findings to the Workgroup to discuss the science underpinning each recommendation. Furthermore, we'd be honored to assemble a group of technical experts to work with BayStat to make specific recommendations for implementing the strategy.

If you are interested in discussing these ideas in more detail, contact Russell Brinsfield, our Executive Director, at (410) 827-6202 or email him at russb2@umd.edu. Thank you.

Enclosure

cc: Matthew Gallaher, Governor's Deputy Chief of Staff
Donald Boesch, President, UMCES
Richard Hall, Secretary, MDP
Shari Wilson, Secretary, MDE
Roger Richardson, Secretary, MDA



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Harry R. Hughes Center for Agro-Ecology, Inc.
Reducing Nutrients from Agriculture
Recommendations
Future Strategy
February 19, 2008

- Target funding both geographically and programmatically. Identify locations geographically (based on soil type, slope, distance to streams, cropping systems, et al.) that are contributing the greatest nitrogen, phosphorus, and sediment loads and then strategically implement a suite of practices to maximize reductions.
- Improve nutrient management planning through a series of practice/program changes including:
 - Making the long-term goal of P-based nutrient management planning to reduce soil P FIV (Fertility Index Value) to below 150 without increasing soil P FIV values for soil currently below 150. The current policy allows farmers to use N-based plans if their FIV is under 150 or if they have a low P Site Index they can use N-based plans even though their FIV is above 150.
 - Developing a GIS system that allows tracking soil P levels at the watershed scale over time. Currently we have no way to quantify at the watershed scale the effectiveness of the current strategy.
 - Providing incentives to eliminate pre-plant inorganic nitrogen applications and the incorporation of organic waste where feasible. Recent research shows that applying nutrients to the soil surface without some incorporation can increase nutrient runoff.
- Fully fund cover crop program (in the near term) with the caveat of reviewing the current policies to make changes to ensure fiscal responsibility. Promote research to quantify their economic value.
- Establish riparian buffers around all intermittent streams, tributaries, and surface waters of the Chesapeake Bay. As a part of this effort, fund projects for farmers to gain experience in growing switchgrass for the emerging biofuels market (both for ethanol and direct combustion on farm). Long-term contracts could provide carbon sequestration and water quality benefits and provide extra income for farmers.
- Fund a monitoring/demonstration/applied research program in several areas of the State at a scale large enough to determine if the nutrient management plans and agricultural BMPs are working. Currently there are no watershed or sub-watershed scale monitoring programs in place.
- Form an agricultural technical committee as a subgroup of the BayStat Scientific Advisory Panel to ensure the latest science is fully integrated into the various programs and provide scientific oversight on allocation of funds.