



## Leading the Nation in Development of a Sustainable Next-Generation Biofuels Industry

As we approach 25 years of partnership to restore Chesapeake Bay, we recognize that our efforts to date have not been sufficient to achieve our water quality goals. At the 2007 Annual Meeting of the Chesapeake Executive Council, we reinforced our commitment to accelerate reductions of nutrient and sediment pollution from all sources across the watershed.

Our region's farmers have a long history of stewardship and conservation. However, their success is only a fraction of what must ultimately be done. Agriculture activity accounts for approximately 40 percent of the nutrient loads and 70 percent of the sediment loads to the Bay, and total agricultural loads must be reduced by 50% in order to meet the Bay's water quality goals. Fortunately, agriculture best management practices have been identified as some of the most cost-effective methods of reducing significant nutrient and sediment loads.

At the same time, segments of the agriculture industry are discovering unique opportunities from an emerging and quickly changing Biofuels industry. Ethanol production has provided new markets for corn, and as a result has impacted the markets and prices for a variety of agricultural crops, already influenced by fuel costs and world food demand. The potential for significant new corn acres in our region has the potential, if not managed properly, to partially offset the water quality gains we have achieved.

Our six-state region consumes 43% of the nation's home heating oil and 13% of its gasoline and we have a responsibility to help reduce our nation's dependence on foreign sources of energy. However, we must look for a sustainable means to do so. Cellulosic feedstocks for next-generation biofuels present a promising option. The trees and grasses that produce cellulosic biomass can absorb nitrogen and reduce sediment runoff to local waterways, and offer potential carbon sequestration and nutrient trading benefits.

A report jointly released this year by the Commonwealth of Pennsylvania and the Chesapeake Bay Commission, *Next-Generation Biofuels: Taking the Policy Lead for the Nation* ("Report"), concluded that our region's climate, soils and landscape, our close proximity to refineries and energy markets, and our thriving biotechnology industry and university research programs position us very well to lead the nation in the production and use of these next generation biofuels. Informed by a 22-member select Biofuels Advisory Panel, the report identified ten state recommendations and ten regional recommendations which are summarized in the attached appendix. If implemented, these recommendations would support the region's goals to reduce nutrient and sediment loadings while strengthening the economic viability of agriculture and forestry in the watershed. To make next-generation biofuels a reality in the Bay region, we must act now.



THEREFORE, we hereby adopt the findings of the above-mentioned Report and commit to lead the nation in next-generation biofuels policy through the following actions:

- ❖ Implementation of Biofuel Action Plans which address the state and regional recommendations as presented in the Report;
- ❖ In 2009, the jurisdictions will develop a regional next-generation Biofuels production goal that includes a plan for market and facility development along with best management practices implementation necessary to support an environmentally sustainable biofuel feedstock;
- ❖ Reconvening of the Biofuels Advisory Panel during 2009 to achieve the following:
  - During the first quarter of 2009, review the Biofuel Action Plans, solicit expert advice, coordinate with emerging federal policies, and determine our best strategies and timeline for regional action;
  - During the third quarter of 2009, review the status of implementation and provide strategic advice on future action, including recommendations for the role the agriculture and forest sectors can play in sequestering and reducing greenhouse gas emissions.

CHESAPEAKE EXECUTIVE COUNCIL

FOR THE STATE OF MARYLAND



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FOR THE COMMONWEALTH OF VIRGINIA



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FOR THE COMMONWEALTH OF PENNSYLVANIA



*Edward G. Randall*

FOR THE DISTRICT OF COLUMBIA



*[Handwritten signature]*

FOR THE CHESAPEAKE BAY COMMISSION



*Arthur D. Hershey*

FOR THE STATE OF DELAWARE



*Ruth Ann Minner*

FOR THE STATE OF WEST VIRGINIA



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# APPENDIX A

## SUMMARY OF RECOMMENDATIONS

*Next Generation Biofuels: Taking the Policy Lead for the Nation*, published September 2008

The recommendations below are suggestions for sustainable cellulosic biofuels policies that make sense for the Chesapeake Bay region at this time. Some are best dealt with in the near term, while others set out long-term objectives for the region.

### RECOMMENDATIONS FOR STATE ACTION

- 1. Proactively communicate consistent messages about the benefits of next-generation biofuels, including cellulosic biofuels, and the importance of their sustainable production.** Convey an awareness that biofuels are happening now, and that their development can happen in a way that maximizes the benefits to farmers, foresters, the general public, the state, and the environment.
- 2. Encourage winter biofuel crops as first-generation feedstocks during the transition to advanced biofuels.** Traditional and newly-developed winter crops, such as hullless barley, should be encouraged as biofuel crops that support existing combustion, grain-based ethanol and biodiesel technologies. They can also be managed to provide many of the benefits of cover crops, including erosion control and absorption of excess nutrients from previous row crops.
- 3. Assure broad and effective use of best management practices for growing and harvesting feedstocks.** Geographically-relevant conservation best management practices should be established for the planting and harvesting of biofuel crops, including crop residues and forest crops.
- 4. Establish or update state removal guidelines for crop residues and forest slash and provide incentives for their adoption.** Crop residues such as corn stover and forest slash hold great promise as feedstocks for cellulosic and other next-generation biofuels, but there are concerns about the effects of their removal on long-term soil quality, erosion control, wildlife habitat and nutrient loadings to streams and the Bay. Consequently, removal guidelines should be established to reflect soil type, climatic conditions and land configuration, among other factors. In cases where existing guidelines were established before the demand for biomass feedstocks was a factor, such guidelines should be updated.
- 5. Provide incentives for creating and implementing forest management plans.** The owner of any forest that provides biomass or fast-growing trees for biofuels feedstock should develop and implement a forest management plan. Special and unique forests with important conservation, historic and social value should be preserved from replacement with biofuel feedstocks, including fast-growing trees.
- 6. Encourage the sustainable production of next-generation feedstocks on abandoned or underutilized land.** States should encourage the establishment of sustainable, next-generation feedstocks on abandoned lands (such as previously mined or farmed areas) as well as on reclaimed mined areas and other underutilized or lower value lands.
- 7. Ensure the nursery and seed industry has adequate supplies of seed and plant stocks.** States should share information about the development of biofuels policy with the nursery and seed industry to ensure that there is an adequate supply of seed and plant stocks to address the anticipated growth of biofuel crops.
- 8. Facilitate the production and purchase of biofuels through consumer incentives and infrastructure development.** In order to create a viable biofuels industry, sufficient infrastructure must be in place to deliver feedstocks to refineries and biofuel products to blenders and the ultimate consumer. Additionally, states should assist in the development of consumer demand for next-generation biofuels by establishing purchase requirements and incentives that range from internal state policy to public tax incentives.
- 9. Utilize state economic development programs.** States should make creative use of their economic development programs to support the development of feedstocks and refining facilities for next-generation biofuels.
- 10. Focus facility support on small, first-stage operations.** States should give priority support to small, first-stage pilot plants for advanced biofuels.

## RECOMMENDATIONS FOR REGIONAL ACTION

- 1. Coordinate regional action to secure funding from the federal Food, Conservation, and Energy Act of 2008 (“the Farm Bill”), the Energy Independence and Security Act of 2007 (“the 2007 Energy Act”), and the Energy Policy Act of 2005 (“the 2005 Energy Act”).** Sections of the two Energy Acts and of the Energy and Conservation titles of the Farm Bill provide opportunities to facilitate the development of next-generation biofuels. But their complexity and funding status as authorizations, mandatory programs and programs needing appropriations all call for ongoing cooperation among the states of the Chesapeake region to assure maximum access and utility of the funds. Bay states should establish a cooperative group to sort through the various provisions and work together to secure funding for biofuels development.
  - 2. Coordinate regional input on U.S. Department of Agriculture (USDA) conservation programs to promote sustainable feedstock production and harvest.** States should ensure that areas under USDA Conservation Reserve and riparian buffer programs may be used for biofuel feedstock production where it is possible to guarantee that the conservation purposes of those programs remain in effect.
  - 3. Discourage use of invasive non-native feedstocks.** States in the Chesapeake region should agree to a long-term protocol that discourages the introduction and use of invasive non-native species as feedstocks for the next generation of biofuels.
  - 4. Encourage local or on-farm use of biomass.** The use of biomass for combustion and gasification at the local or farm level should be encouraged. This sustainable practice, valuable in its own right for meeting energy goals, also helps build the market and infrastructure for next-generation biofuels from the same types of feedstock.
  - 5. Develop a regional carbon trading strategy that addresses the role of biofuels.** A regional strategy should be developed to maximize opportunities from a federal carbon trading protocol and provide guidance for the role of biofuels in the carbon trading market. The strategy should be advocated to the region’s Congressional leaders.
  - 6. Coordinate as a region to affect national energy policy.** National policy must establish an even playing field for advanced cellulosic biofuels, and regional leaders should work with their Congressional delegation to ensure this is a priority.
- Similar work should occur with state legislatures to achieve such fairness in state laws. Particular attention should be paid to even-handed treatment for all fuels.
- 7. Establish a regional analytical framework for biofuels development.** A regional biofuels analytical framework is needed to estimate how the industry will evolve, with regular updates that address regional feedstock capacities, competing uses, potential limitations such as water supply, economic diversity, infrastructure needs, and the potential benefits to the economy and state revenues. An advisory group of outside experts should be established to support this effort.
  - 8. Establish a regional strategy to encourage greater use of higher blends of biofuels.** As higher blends of biofuels become available, states in the Chesapeake region should work with the private sector to maximize their availability and use. The strategy could include incentives and warranties to encourage sales of vehicles that use higher blends, the installation of blender pumps and the guarantee of access to higher blend biofuels along major interstate highways or within heavily-populated areas.
  - 9. Establish regional research priorities.** A regional agenda of research priorities should be developed with the participation of private sector biofuel interests, the regional biotechnology industry, government and the university-based biofuel research community.
  - 10. Implement a regional outreach effort.** A coordinated regional outreach effort should be established to ensure that the national and worldwide biofuels markets are fully informed about the natural assets and advantages of the Chesapeake region for the next generation of biofuels, namely:
    - The climate and soils to grow a wide diversity of feedstocks;
    - Great variety in landscapes and land types for growing feedstocks;
    - An underutilized forest products capacity;
    - A reliable supply of municipal solid waste;
    - The potential for refining facilities of all scales located near feedstocks;
    - Ready integration of biofuel production with animal agriculture;
    - Close proximity to petroleum blenders and markets;
    - A thriving biotechnology industry; and
    - An excellent university-based biomass research infrastructure.