

Rappahannock River Basin Symposium 2009
FINAL REPORT

Background:

The 2007 Rappahannock River Basin Summit led the Commission to make eight recommendations to the Administration, the General Assembly, member localities and relative to the future work plans of the Commission. One of those recommendations was for the Commission to devote efforts to investigate how to encourage “market-based” solutions to water quality problems. The Commission concluded that after more than 25 years and \$6 billion of federal, state and local tax dollars invested across the Bay States we have, *at best*, held our own and we question the availability of resources to continue to invest at that level. Therefore we must look for new strategies. The Commission has asked the question – what if we identify and implement strategies that promote a River/Bay Friendly Economy? Can we identify and encourage products and services that enhance water quality that people and businesses choose to purchase because it makes economic sense for them? Hence the concept of market-based solutions or strategies.

The Commission spent much of 2008 and 2009 exploring this concept. We found that the Virginia Department of Forestry was engaged in a similar exercise through efforts to strengthen Virginia’s forest industry by developing the concepts of Ecosystem Services. Natural ecosystems produce services upon which we are dependent. For example, they provide us with clean water and air; pollinate our crops and disperse seeds; protect us from extreme weather and ultraviolet light; and control pests and disease-carrying organisms. The Department of Forestry has worked to enhance the value of forest land through recognition of these ecosystem services. If landowners can generate added revenue through the provision of these services then forestland becomes more valuable and the industry is enhanced.

The Commission and its technical committee, the Non-Point Source Pollution Work Group, identified other examples of market-based approaches such as water harvesting and conservation efforts by business, institutions and government. These efforts set the stage for the major Commission activity of 2009, the Rappahannock River Basin Symposium, dedicated to testing a proposal for a bioregional marketplace for Bay-friendly products and services. The symposium, *Incentivizing Restoration through a Chesapeake Bay Economy*, was held on December 9, and was sponsored by the Commission along with the Virginia Department of Forestry, Conserv, the Department of Conservation and Recreation and the Fredericksburg Regional Chamber of Commerce. The RRBC wishes to thank all involved from the planning through the active participation on December 9th. We would also like to thank the University of Mary Washington for hosting the event at the College of Graduate and Professional Studies located in Stafford County. (A full list of planners, partners, conveners and participants is included in the report appendix).

The symposium focused on a “Prospectus for the creation of the Rappahannock Exchange”, a bioregional marketplace for the transaction of Bay-friendly products and services, and on an

advisory body that would create the Exchange, the Rappahannock Ecosystem Services Council (also included in the appendix).

Unlike other typical environmentally related conferences, this program was expressly geared to accommodate government, the private non-profit sector, and particularly, the private for-profit sector. The intended outcome of the informational sessions and discussions was to explore ways to economically incentivize river basin water quality goals as a means of augmenting programs now employed by non-profits and government.

The Purpose of this Report:

This report summarizes the discussions and recommendations generated during the Symposium: the “testing” of the Prospectus. The Appendix of this report includes all of the documents relevant to the day’s discussions and activities.

Business Background:

In order to provide the business background what follows are several excerpts from the Rappahannock Exchange Prospectus.

The Vision of this initiative is, in the name of national treasures such as the Chesapeake Bay, to strengthen and synergize the relationship that exists between government and commerce. In short, The Vision of this initiative is a Chesapeake Bay Economy. We believe that in fact, implementation of government policy through commerce is one of the most promising ways to fundamentally change government.

We propose to do this through creation of the nation’s first bioregional marketplace designed to help restore a keystone environmental asset. To us, “bioregional” means a particular bioregion, or an area defined by its biological assets, such as a watershed. A “marketplace” is a commercial platform for the transaction of environmental asset-friendly goods and services. Therefore, a bioregional marketplace is simply a commercial platform for the transaction of products and services that enhances ecosystem health.

The Rappahannock River Basin Commission and others believe that it has become self-evident that ecosystems such as the Chesapeake Bay cannot be restored solely through traditional command and control environmental schemes utilized by federal and state government agencies. To go beyond compliance, the economy of a bioregion needs to be reformatted to enroll businesses in the work of ecosystem restoration via the types of products and services marketed. The Rappahannock Exchange has been proposed as a vehicle to stimulate demand for these particular products and services. Economic theory for the structure and functioning of the Exchange is based on the writings of economists such as Robert Costanza, Herman Daly, J.R. Hicks, Wassily Leontief, and Salah El Serafy.

The Prospectus includes seven key components of the Rappahannock Exchange:

- 1) A strong and relevant watershed commission and culture.
- 2) One or more restoration goals for the River and the Bay that drives the marketing of particular companies, products, and services through the Exchange.

- 3) Chesapeake Bay Ecological Indicator that measures the degree that Exchange companies, products, and services meet each Restoration Goal.
- 4) Exchange Marketing.
- 5) Supply of Exchange Products and Services.
- 6) Demand for Exchange Products and Services.
- 7) The physical embodiment of the Exchange, featuring a robust Internet portal resembling Wikipedia, eBay, Amazon, or Craigslist or some combination of these (depending on the category of supply), that allows on-line listing and purchase, as well as point of purchase sales of Exchange-approved inventory from retailers throughout the basin.

The Prospectus included an elaborate flowchart of how the transaction network might work as well as vignettes of the types of transactions that could occur among individuals and businesses.

Summary of Recommendations, Observations and Feedback:

The full list of recommendations, comments and feedback to the testing of the Prospectus is included in the Appendix. The summation of that information can be set out in several broad areas:

- The absolute need for transparency of the money/funding involved – where it comes from and how it is used.
- The Prospectus set forth an approach that appears too complex – there must be clear goals and measurable, understandable outcomes.
- Branding, marketing and public education will be essential to the acceptance and success of this commercial enterprise.
- There was broad concern about the initial scale of the project, both the geographic size and the long (5 year) time horizon to launch and test the business concepts.
- Concern was expressed relative to the profit versus non-profit business approach – this has to be resolved before proceeding.

Next Steps:

There are several concurrent “next steps.”

- Conserv is using the feedback from the Symposium to develop the next version – The Rappahannock Marketplace (essentially an “Exchange 2.0”)
- Conserv will convene the Rappahannock Marketplace Business Council which will advise Conserv on the Feasibility Studies conducted for the Marketplace – this will provide the business sector perspective.
- The RRBC Non-Point Source Pollution Work Group (NPWG) will support Conserv in the development of the Rappahannock Marketplace by serving as a “sounding board” and developing the information that will be presented to the Commission in a work session in June 2010 (the next quarterly meeting).
- The RRBC will conduct a work session on the Rappahannock Marketplace and together with the input of the NPWG provide essential government sector perspective.

- The Chair of the RRBC will facilitate a briefing of the three key Cabinet Secretaries (Natural Resources, Agriculture & Forestry and Commerce & Trade) to inform them of the efforts to date and of the economic development and environmental improvement opportunities of the Rappahannock Marketplace.
- Based on the perspectives provided in the steps above Conserv and the RRBC will further refine the Rappahannock Marketplace.
- Seek startup funding from private and public sources to begin the field-testing detailed in the Rappahannock Marketplace.

As this report is being produced Conserv has invested considerable energy in the development of a Rappahannock Marketplace Proposal designed to address some of concerns raised at the symposium. The RRBC NPWG has begun to review the Proposal and will be interacting with Conserv to carry out the steps outlined above.

Rappahannock River Basin Symposium 2009

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APPENDIX

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APPENDIX

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Sponsors and Partners:

Rappahannock River Basin Commission
Conserv
Virginia Department of Forestry
Virginia Department of Conservation and Recreation
Fredericksburg Regional Chamber of Commerce

Conveners:

The Honorable State Senator Emmett Hanger, 24th Senate District, Chair,
Rappahannock River Basin Commission

The following Conveners are listed alphabetically:

Phil Brown, Food Safety Manager, Wegmans Group
David Crowe, Investment Banking (Retired)
Butch Davies, Attorney and Member, Commonwealth Transportation Board
Margaret Davis, Rose Hill Farm and Member, Essex County Board of Supervisors
Pamela Faggert, Dominion Resources
Faye Gish, Owner, Faye's Office Supply, Inc.
Dan Gregg, Owner, Grelen Nursery
Joe Grzeika, President/Owner Joetech LLC and Chair, King George County Board
of Supervisors
Robert Hagan, President, Fredericksburg Regional Chamber of Commerce
The Honorable State Senator R. Edward Houck, 17th Senate District
Robert Lee, Executive Director, Virginia Outdoors Foundation
Jerry Logan, Owner, Logan Electric and Member, Spotsylvania County Board of
Supervisors
Alex Long, A-Long Realty Advisors and Chair, Port Royal Planning Commission
John Meggs, Nature Neutral, Green Building Supply
George G. Quarles, COO Transports and Purchasing, Quarles Petroleum Inc.
Peter Rice, Founder, Plow and Hearth
The Honorable Delegate Ed Scott, 30th House District
The Honorable State Senator Richard Stuart, 28th Senate District
John Tippett, Executive Director, Friends of the Rappahannock
Buzz Van Santvoord, Road Runner Logistics Consulting

Planning/Steering Committee:

The members of the Rappahannock River Basin Commission Non Point Source Pollution Work Group were responsible for planning the Symposium. A sub-group was formed to meet more frequently to serve as the Steering Committee.

Active Work Group Members:

Eldon James, RRBC Staff
Mac Saphir, Virginia Cooperative Extension
Denise Harris, Fauquier County
Kevin Byrnes, George Washing Regional Commission
Bill Latane, Farm Bureau
Chip Rice, VCU/DCR
Michael Collins, Conserv
Corey Simonpietri, ACF Environmental
David Nunnally, Caroline County
John Tippett, Friends of the Rappahannock
Deirdre Clark, Rappahannock-Rapidan Regional Commission
Stuart McKenzie, Northern Neck Planning District Commission
Terry Lasher, Virginia Department of Forestry
Joe Thompson, Northern Neck Land Trust
Kevin Utt, Building and Development Services, City of Fredericksburg
Kathleen Harrigan, Tri-County City SWCD

Steering Committee Members:

Eldon James, RRBC Staff
Mac Saphir, Virginia Cooperative Extension
Denise Harris, Fauquier County
Chip Rice, VCU/DCR
Michael Collins, Conserv
Kevin Utt, Building and Development Services, City of Fredericksburg
Kathleen Harrigan, Tri-County City SWCD
Jacquelyn Pogue

Incentivizing Restoration through a Chesapeake Bay Economy
a Symposium Hosted by the
Rappahannock River Basin Commission

December 9, 2009

University of Mary Washington, Stafford Campus

- 7:45 a.m. Registration**
- 8:30 a.m. Welcome** – Senator Emmett Hanger, Chair Rappahannock River Basin Commission (RRBC), Virginia’s 24th Senate District and Peter Rice, Founder, Plow & Hearth
- 8:40 a.m. Background** – Joseph Grzeika, Vice-Chair RRBC, Chair of the King George County Board of Supervisors
- 8:45 a.m. Symposium’s Mission and Process** – Kathleen Harrigan, SWCD Representative to the RRBC, Director Tri-County Soil and Water Conservation District
- 8:50 a.m. History of the Rappahannock** – Roy Jarnecke
- 9:00 a.m. The Vision for a Chesapeake Bay Economy** – Congressman Rob Wittman, Virginia’s 1st District
- 9:15 a.m. Understanding the Pillars of a Chesapeake Bay Economy**
- Environmental Stewardship: Enhancing Business Opportunities
 - Chesapeake Bay Restoration – Virginia Public Policy
 - Ecosystem Services
 - The Interdependence of Urban and Rural Environments
- Speakers: David Carroll, Senior Advisor in Environmental Management and Governmental Affairs, Lafarge North America, Inc. and the Wildlife Habitat Council; Bob Lee, Executive Director, Virginia Outdoors Foundation, Buck Kline, Virginia Department of Forestry
- 10:00 a.m. The Rappahannock Exchange Proposal – Conceptual Design and Workplan** – Michael Collins, Executive Director, Conserv
- 10:15 a.m. Discussion of the Proposal in Small Groups** – Jacquelyn Pogue, Symposium Moderator
- 11:45 p.m. Luncheon and Keynote Address – EPA’s Chesapeake Bay TMDL** - Robert A. Koroncai, Chesapeake Bay TMDL Manager, USEPA Region III
- 1:10 p.m. Summary of Comments from Discussion of the Proposal** – Jacquelyn Pogue
- 1:30 p.m. Discussion of Factors Affecting the Development and Implementation of the Rappahannock Exchange** – Denise Harris
- 2:30 p.m. Summary of Outcomes and Where We Go From Here**
- 3:00 p.m. Adjourn**

Attendees:

Jennifer Allen	Programs Manager	Friends of the Rappahannock	Fredericksburg
Danny Allensworth	Director - Westmoreland County	Northern Neck Soil & Water Conservation District	Warsaw
William Crigler	Board Member	Madison County Board of Supervisors	Madison
Faye Hundley	Secretary	Cloverfield Enterprises	Champlain
Pranas Rimeikis	Mayor	Town of Culpeper	Culpeper
Karen Terwilliger	Resource Consultant	Terwilliger Consulting, Inc.	Locustville
Anna Collins	High School Teacher	Orange County High School	Orange
Robert Suydam		Virginia Department of Forestry	Sandston
Ed Bain		Conserv	Charlottesville
Deirdre Clark	Planner	Rappahannock-Rapidan Regional Commission	Culpeper
Harry Crisp	GW District Supervisor	Stafford County Board of Supervisors	Falmouth
Bill Johns	Market President-Eastern Region	Essex Bank	Tappahannock
Mary Sherill	Environmental Scientist	Fauquier County Government	Warrenton
Bridget Ungerleider	President	Encompass Environmental Supply and Rental Co.	Richmond
Emmet Hanger	Senator	Virginia Senate	Mount Solon
Buck Kline	Director, Division of Forestland Conservation	VA Department of Forestry	Charlottesville
Todd Benson	PEC Land Use Attorney	Piedmont Environmental Council	Warrenton
Philip Brown	Food and Human Safety Coordinator	Wegmans Food Markets	Fredericksburg
Prue Davis	Member	Essex County Board of Supervisors	Center Cross
Rob Farrell	Forest Land Conservation	VA Department of Forestry	Charlottesville
Kathy Harrigan	Director	Tri County/City SWCD	Fredericksburg
Gordon Jones	Land Surveyor	Bay Design Group	Gloucester
Tim Ungerleider	Vice President/Operations	Encompass Environmental Supply and Rental Co.	Richmond
Gem Bingol	Field Officer	Piedmont Environmental Council	Warrenton
Nathan Brown	Landscape Architect	McKee Carson/Field Sport Concepts, Ltd.	Charlottesville
Eddie Dean	Chairman	Madison County Board of Supervisors	Madison
Jonah Fogel	Community Viability Specialist	Virginia Cooperative Extension	Richmond
Alex Long		A-Long Realty Advisors	Port Royal
Kevin Utt	Development Manager	City of Fredericksburg	Fredericksburg
Buzz Van Santvoord	Business Consultant	Road Runner Consulting	Orange
Aurelia Amory Scharnhorst	Comptroller	L.D. Amory and Co., Inc.	Hampton
Kelly Brown	Self Employed	Site Design Services	Fredericksburg
Michael Collins	Executive Director	Conserv	Charlottesville
Amber Forestier	Environmental Planner	Stafford County Planning and Zoning Department	Stafford
Matt Lewis	Director/VCE Extension Agent	Northern Neck Soil & Water Conservation District	Warsaw
Bob McKee	Founding Principal	Field Sport Concepts, Ltd.	Charlottesville
Angel Utt	Capital Projects Management	Spotsylvania County	Spotsylvania
Lori Whitacre	Mid-Atlantic Region	Burgess & Niple, Inc.	Woodbridge

	Environmental Director		
Amy DeHart	Assistant Director - Center for Leadership and Ethics	Virginia Military Institute	Lexington
Rich Collins	President	TJ Water Protection Fdn	Charlottesville
David Crowe	President	Rockfish Capital	Hood
Joe Grzeika	Board of Supervisors	King George County	King George
Terry Lasher	Assistant Regional Forester	Virginia Department of Forestry	Warrenton
Anne Little	Director	Tri-County/City SWCD	Fredericksburg
John Meggs	President	Nature Neutral Building Supply	Charlottesville
Matt Walker	Director of Community Development	Middlesex County	Saluda
Janet Wright		Concerned Citizen	Fredericksburg
Michael Bass	Professor	University of Mary Washington	Fredericksburg
Greg Harper	Water Resources Manager	Albemarle County	Charlottesville
Bill Latane	Assistant Director - Field Services	Virginia Farm Bureau Federation	Montross
Jimmy Meredith	Owner/Operator	Hammer Time Marine	Deltaville
Leslie Middleton	Executive Director	Rivanna River Basin Commission	Charlottesville
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Bill Parker		Colonial Beach - Beach/Water Restoration	Colonial Beach
Chip Rice		VCU Center for Environmental Studies/DCR	Richmond
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Jackie Gallagher	Assistant Professor	University of Mary Washington	Fredericksburg
Denise Harris	Program Manager	Fauquier County	Warrenton
Maggi MacQuilliam		Piedmont Environmental Council	Warrenton
Michelle Meredith	Owner	Hammer Time Marine	Deltaville
Judy Okay	Riparian Specialist	CBP/VDOF	Annapolis
Dick Bethune		Earth Care House Church	Harrisonburg
Johnny Davis	Farmer	VA Agribusiness Council	Port Royal
Erin Gunzelman		University of Mary Washington	Fredericksburg
Jerry Logan	Courtland District Supervisor	Spotsylvania County	Fredericksburg
Zeke Moore	Professional Engineer	Sullivan, Donahoe, & Ingalls	Fredericksburg
Jim Mosher	Executive Director	Alliance for the Chesapeake Bay	Baltimore
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Virginia Bethune		Earth Care House Church	Harrisonburg
Teri Pace	Orange County Supervisor	Pace Fence and Livestock Co.	Unionville
Sue Rowland		SR Consulting Inc.	Woodbridge
Nick Evans		Virginia Groundwater LLC	Charlottesville
Jeremy Larochelle	Assistant Professor	University of Mary Washington	Fredericksburg
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Beth Burnam-Pastore	Madison Field Officer	Piedmont Environmental Council	Wolfstown
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	Liaison		
Wanda Parrish	Planning Director	Spotsylvania County	Fredericksburg
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Dana Herlong	Architect	Herlong Associates Inc., Architects	Fredericksburg
Hank Hartz		Virginia Outdoors Foundation	Oilville
Robert Koroncai	Chesapeake Bay TMDL Manager	USEPA Region III	Philadelphia
Ray Pickering	Director	Fauquier County Agricultural Development Dep.	Warrenton
Ian Pope		University of Mary Washington	Newtown
Peter Rice	Chairman	Elk Run, LLC	Madison
Ed Scott	Delegate	206 S Main St, Suite 203	Culpeper
Logan Yonavjak		World Resources Institute	Washington
Janice Cessna	Mitigation Banking Program Manager	Wetland Studies and Solutions, Inc.	Gainesville
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Beverly Pullen	Business Coordinator	Fauquier County Economic Development	Warrenton
Cassandra Ratti	Student	University of Mary Washington	Fredericksburg
Scott Roberts	Principal	Rare Sky Studios	Ruther Glen
May Sligh	TMDL/Watershed Field Coordinator	DCR/UMW	Tappahannock
Joe Starinchak	Outreach Coordinator	U.S. Fish & Wildlife Service	Arlington
Jeffery Hancock	Senior Engineer	Williamsburg Environmental Group, Inc.	Williamsburg
Eldon James	Staff	Rappahannock River Basin Commission	Richmond
Jeff Curtis	Director	Orange Downtown Alliance	Orange
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Jay Hundley	President	Cloverfield Enterprises	Champlain
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Chesapeake Bay Foundation
Caroline County
Falling Springs LLC
Spotsylvania County
Spotsylvania County Utilities Department
Spotsylvania County Utilities Department

Richmond
Bowling Green
Richmond
Fredericksburg
Fredericksburg
Fredericksburg

The Rappahannock Exchange

*A Bioregional Marketplace to restore the Rappahannock River and the
Chesapeake Bay*

A National Pilot Program of the Rappahannock River Basin Commission

P r o s p e c t u s

Prepared By:
Conserv™

For:
The Rappahannock River Basin Commission

December 3, 2009

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Kathleen Harrigam

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Kevin Utt

Buzz Van Santvoord

Brad Williams

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Author: Michael Collins, Executive Director, Conserv

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Vision

The Vision of this initiative is people making environmentally informed purchasing decisions to help to implement healthy ecosystem goals set by their local, state, and federal governments. The Vision of this initiative is to create bioregional marketplaces throughout the U.S. to help government and NGO's restore our nation's greatest environmental assets. The Vision of this initiative is, in the name of national treasures such as the Chesapeake Bay, to strengthen and synergize the relationship that exists between government and commerce. In short, The Vision of this initiative is a Chesapeake Bay Economy.

What is a Bioregional Marketplace?

It's time to fundamentally change the way that we do business in Washington. To help build a new foundation for the 21st century, we need to reform our government so that it is more efficient, more transparent, and more creative. That will demand new thinking and a new sense of responsibility for every dollar that is spent.

-President Obama

It may seem strange to juxtapose the words “bioregional marketplace” with a quote on reinventing government from President Obama. We believe that in fact, implementation of government policy through commerce is one of the most promising ways to fundamentally change government.

We propose to do this through creation of the nation's first bioregional marketplace designed to help restore a keystone environmental asset. To us, “bioregional” means a particular bioregion, or an area defined by its biological assets, such as a watershed. A “marketplace” is a commercial platform for the transaction of environmental asset-friendly goods and services. Therefore, a bioregional marketplace is simply a commercial platform for the transaction of products and services that enhances ecosystem health.

Justification

It has become self-evident that ecosystems such as the Chesapeake Bay cannot be restored through traditional command and control environmental schemes utilized by federal and state government agencies. To go beyond compliance, the economy of a bioregion needs to be reformatted to enroll businesses in the work of ecosystem restoration via the types of products and services marketed. The Rappahannock Exchange has been proposed as a vehicle to stimulate demand for these particular products and services. Economic theory for the structure and functioning of the Exchange is based on the writings of economists such as Robert Costanza, Herman Daly, J.R. Hicks, Wassily Leontief, and Salah El Serafy.

Description of the Rappahannock Exchange

Overview

Imagine a day in the not too distant future when the government and private sector work in concert to achieve Bay restoration. Imagine watershed-based marketplaces found in every major river basin transacting products and services, every one of which, brings the Bay back to life.

Imagine communities, businesses, and landowners interacting within new commercial platforms that provide yearly landowner payments for healthy Bay land uses from private transactions.

This national pilot project will integrate environmental goals and policy with commerce. This unique initiative significantly addresses stimulating, creating, and sustaining demand for the environmental infrastructure provided by our farms and our rural and urban forests. Financially rewarding landowners who provide this infrastructure **and** enhancing the economic opportunities of businesses that participate in the Exchange is a core principle.

There has been considerable work done across the Nation with developing tools that quantify ecosystem services, registries that list marketable ecosystem service projects, and marketing protocols. Much of this work is “supply side” oriented. The supply side framework provides very important functions that are necessary to ensure that quality environmental assets and services are available for trade. What makes the Rappahannock Exchange initiative very unique is that it creates an economic platform that integrates the supply side framework with corporate and personal environmental stewardship and social responsibility. Commerce will emerge that promotes ecosystem health of the Chesapeake Bay and the Rappahannock River Basin.

There are 7 key components of The Exchange. Component 1 is a strong and relevant watershed commission and culture. The Rappahannock is a perfect pilot watershed for the proposed program due to the culture of the River Basin Commission, which can best be summarized as a vehicle for solutions, not for the “pointing of fingers”.

Component 2 is one or more restoration goals for the River and the Bay that drives the marketing of particular companies, products, and services through the Exchange. These goals may include those already developed by federal and state government agencies, NGO’s, and watershed communities. Those goals that can serve as proxies for many other Bay goals and are simple enough for elementary school-aged children to understand are most likely to be selected by the Commission for implementation through the Exchange.

Component 3 is a Chesapeake Bay Ecological Indicator that measures the degree that Exchange companies, products, and services meet each Restoration Goal. This Indicator is the link between government policy and product and service sales in the watershed.

Component 4 is Exchange Marketing. Multi-year, robust, watershed-wide marketing is critical to the success of the initiative because it is this marketing that drives demand, and feeds supply.

Component 5 is **Supply** of Exchange Products and Services. Examples of these may include:

- Forestry and agricultural projects (for example, tree planting and no-till agriculture) that provide and enhance ecosystem services and benefits will be available for market through the Exchange. These projects will adhere to specific protocols to insure environmental enhancements that are quantifiable and verifiable, both important criteria for market. Projects listed on the Bay Bank registry, or from a new Rappahannock Registry (that would be complementary to the Bay Bank), or meet the protocols/criteria of regulatory programs such as outlined by the Virginia Nutrient Credit Trading program, wetlands mitigation banking, or perhaps from Virginia’s new stormwater law will be considered quality, marketable projects
- Environmental asset leasing, such as for-fee hunting, fishing, and birding

- Conservation real estate (which is simply lands known to be managed with conservation as a priority (i.e. good stewardship) voluntarily implemented, through day-to-day real estate transactions)
- Any product or service, with an ecological indicator rating (evaluating the company, product, or service, depending on the category of supply), that a business would like to list on the Exchange

Component 6 is ***Demand*** for Exchange Products and Services. Examples of demand include:

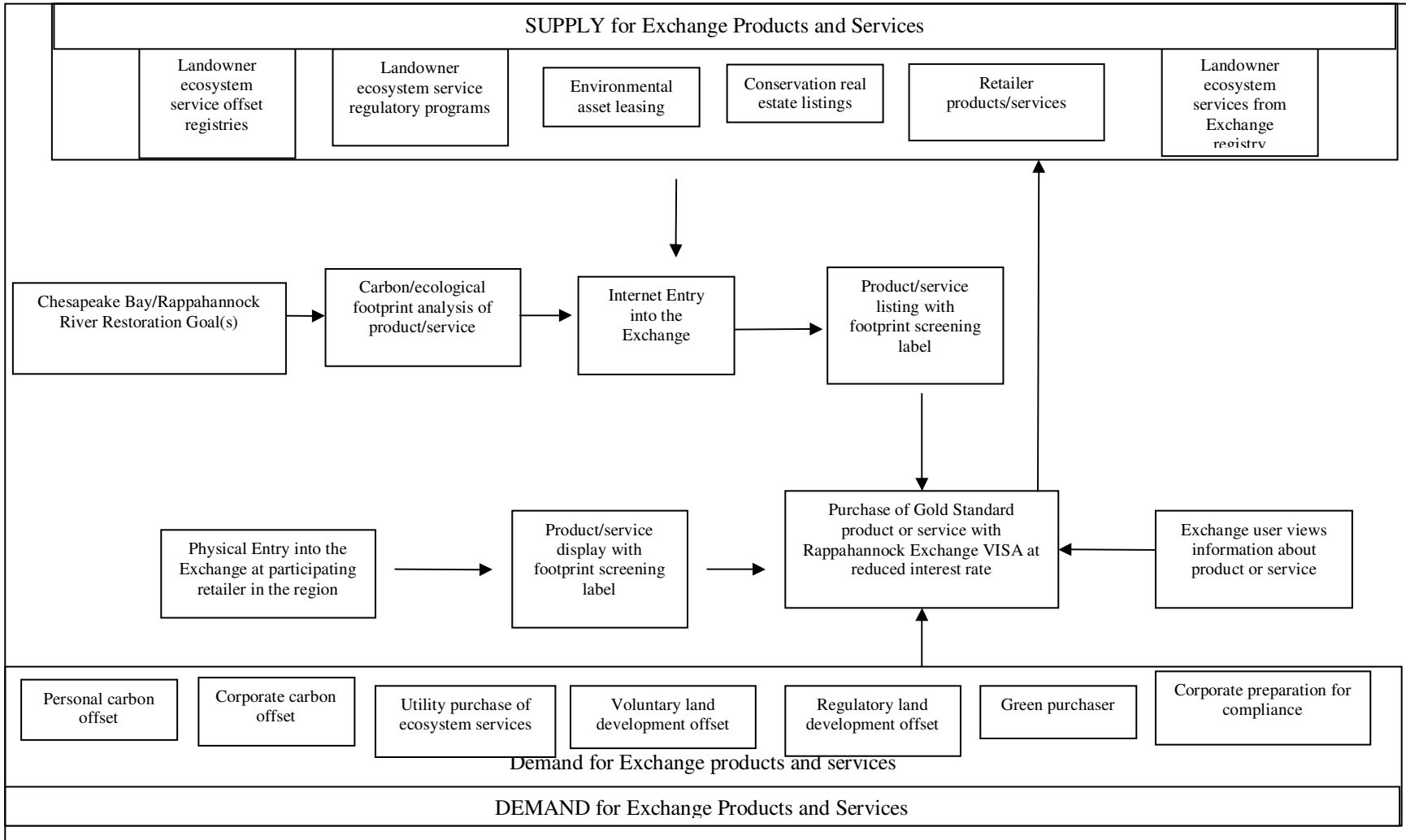
- Purchase of ecosystem services with funds from local water/sewer authorities
- Voluntary and regulatory land development offsets
- Corporate and personal greenhouse gas - neutral initiatives
- Purchases of general merchandise from Rappahannock River and Chesapeake Bay concerned citizens, businesses, entities, and governmental agencies

Component 7 is the physical embodiment of the Exchange, which features a robust internet portal resembling Wikipedia, eBay, Amazon, or Craigslist or some combination of these (depending on the category of supply), that allows on-line listing and purchase, as well as point of purchase sales of Exchange-approved inventory from retailers throughout the basin.

Exchange Conceptual Diagram

The following flowchart provides a two-dimensional representation of the relationship of the Exchange components described above.

Rappahannock Exchange Marketing



*The Rappahannock Exchange:
A Bioregional Marketplace to Restore the Rappahannock River and the Chesapeake Bay*

What Success will Look Like to the Consumer

Imagine the Rappahannock River Basin in 2020 - One hour in the life of Jane Harris

Jane Harris, a hypothetical wife, teacher, mom, and rural landowner in Spotsylvania County, in the heart of the Rappahannock River watershed, on the way to her job notices that she needs gas – and for the first time notices that the logo on her new Rappahannock Exchange credit card is displayed on the retailer’s large highway sign and quickly pulls in.

Swiping her card, the dispenser display says that a half-cent of every gallon is deposited by the retailer in the Exchange Chesapeake Bay Fund. She realizes that her husband, who works part-time for the local Soil and Water Conservation District on reforestation projects in the area, is also financially supported by this program. As she fills the tank, she notes the information on the display---that because the retailer has met the Exchange Gold Standard for greenhouse gas emissions offsets, her credit card company finances the purchase at a 2% discount. Thinking she doesn’t know of any other gas station that participates in the Exchange, she fills up the tank, a sale that the retailer would not have otherwise received.

On the way home

Jane picks up the kids from school and realizes this will be the best time to swing by the hardware store to get some paint for the kids’ rooms. She walks into the paint department and as she is checking out the colors, out of the corner of her eye, she again sees the Rappahannock Exchange Logo above the interior paints. The Gold Standard is above a brand she hasn’t heard of before. She reads the label and notes that it is especially formulated for kids with the kind of chemical sensitivities her daughter has. In another area she notices the logo but this time it is shown as a Blue Standard, noting the paint is nearly as friendly to the Bay as paint with the Gold Standard. She notes that the paint in this area has reduced VOC’s (Volatile Organic Compounds) and contains synthetic compounds. On a budget, she buys the Gold Standard for her daughter and Blue Standard for her son---the Blue Standard is 10% less than the Gold. She gets the same discount with her Exchange Credit Card as she got on the gas and on the way out notices that the cost of the Gold Standard paint is the same as the hardware store’s generic brand.

Jane drops off her son at the neighbor’s house

The neighbors own 5 acres of worn out pasture land with steep slopes. The local Soil and Water Conservation District is paying kids to maintain hardwoods and enhance biodiversity through Exchange offset funds. Her husband, a Forestation Coordinator with the District, who is managing her neighbor’s project, brings him home just after dark. 50% of her husband’s salary is generated from the Exchange.

Bringing the mail in from the car

Found in the bills, is a check from The Exchange for \$1000.00-for their 10 acres of pine plantation– the yearly payment for bundled ecosystem services. She puts the money in her purse and puts the flyer on undergrowth spraying under a magnet on the refrigerator for her husband. As she pulls the flyer from the envelope, she also finds a list of herbicide applicators, and circles for her husband the ones with the Gold Standard.

Checking her online bank account after the kids go to bed

After checking her balance, the system prompts her to enter her commuting miles for the week into the Personal Carbon Neutral Calculator (she voluntarily participates in). She notes that \$5.00 was deducted from her balance and matched by her bank and deposited in the Exchange Carbon Neutral Fund. The fund distributes money back out into the region for conservation-related economic development projects on agricultural and forested lands.

That Evening

Scanning the local paper as she lies down on the couch, Jane notes that a new commercial store has provided a voluntary contribution to the Exchange Forestation Fund to offset the forest cover loss from the new project. She also notes an ad run by the Exchange showing that Culpeper County is beating Spotsylvania County in a Bay Restoration Challenge. She calls her mother across the County to tell her to order a Rappahannock Exchange credit card and to start purchasing Bay-friendly products and services in Spotsylvania County!

What Success will Look Like to the Business Person

Billy and Elaine Williams

Billy and Elaine Williams are business owners in Tappahannock. Billy is part-owner of a large building supply store. Elaine is a nutritionist and physical fitness coach.

Opening Shop on Monday Morning

For Billy, no sooner did the keys go in the door, than the phone rang. His yard manager was on the phone asking for directions to a local builder for the delivery of 20 gallons of health-friendly paint, 600 sq. ft. of recyclable carpet, and 400 sq. ft. of locally harvested, milled, and pre-finished hardwood flooring. Billy notes:

A decade ago, before the Rappahannock Exchange, it was hard for me to move these kinds of products. They were more expensive than my other products and people during the Great Recession just weren't willing to pay anything extra. What the Exchange did for me is first, helped increase my volume sold of these kinds of products.

When the Exchange endorsed this line of paint I was looking to sell as safe for the river, that gave me the confidence I needed to include it in my inventory. I sold enough to be able to open up a distribution center for the mid-atlantic region here in Tappahannock, so I now also wholesale this paint to retailers along the east coast. That increased volume combined with the reduced interest rate charges available to consumers using the local bank's Exchange Credit Card meant that consumers would pay the same price as for Bay-unfriendly products.

I tell you what else the Exchange did, it allowed me twice a year access to its database of names and addresses. That's huge. They feature and endorse my Bay-friendly products in a special mailing that goes out to Exchange users that may have never heard of our company, but have used my wife Elaine's staff for nutrition help. In her wellness practice, Elaine features the use of local agriculture products and pays one of the landowners outside of Town a small fee to use a special hiking trail in their older growth forest, which according to recent research, helps some asthma patients. Folks that use Elaine's services also apparently like to use a law firm down the street that prepares those reforestation contracts for landowners at a reduced rate. All this means that the Exchange provides a natural form of marketing that people want to receive because it is targeted to match up Bay-friendly products and services with Bay-concerned consumers. Later that Day

During the mid-afternoon sales slowdown, Billy drives out to see the newest reforestation offset project with a group of other local business people. The project, not 30 miles from his store, was made possible by funds provided through the Exchange. He notes that while there is no administrative fee for participation, the non-profit entity that runs the Exchange retains a small percentage of the sale price for operations and to fund these types of community projects. Billy notes that not only is the offset fund paying for the trees but also to help support the staff that is needed for these projects. Elaine notes that because it would be time consuming to track the sale of services that come through The Exchange, she earmarks a small part of her marketing budget for ongoing support. She's happy to do it, noting that the same farmers that are getting yearly ecosystem services payments are also seeing greater demand for their local meat and poultry that are featured in her wellness programs.

Funding for these forest cover (or no-till agriculture) projects also comes from a wide range of local companies that want to go carbon neutral or purchase nutrient or sediment reduction credits. Funds also have been created through the Rappahannock Area Builder's Association Bay Neutral program, that provides an option for homeowners to purchase a house and lot development package that provides funds for Exchange programs that offset nutrient, sediment, and biodiversity impacts from construction projects.

Returning to the Store

Walking back in the store, Tom, the contractor sales supervisor, asks Billy if he knows why they may have had an increase in calls on the low-VOC deck stain sale that has been a little slow moving out the door. Billy calls Martha, Fullfillment Manager at the Exchange and gets his answer. Every day last week, The Exchange sent out package stuffers featuring the deck stain sale for all the Rappahannock Exchange T-shirts sold by The Exchange. According to Martha, a local grocery store that is a member of the Exchange ran a marketing event awarding a custom long sleeve organic cotton tee for every \$75.00 in bay-friendly foods sold. According to Martha, that store generated 200 orders for shirts, each of which had a deck stain package stuffer included.

Imagine the Impact of a World with folks like Jane Harris Billy and Elaine Williams

If only 10% of the persons living in the Rappahannock River Basin shop in a manner similar to Jane Harris, 30,000 persons per year (10% of the river basin's population) would be brought into active financial partnership on a day to day basis with Bay restoration policies. The cumulative impact of tens of thousands of small, daily, Bay-friendly purchasing decisions on CO2 reduction, forest cover, and any other governmental goal, could be enormous. These types of business transactions could mean new business opportunities for every economic sector in the basin.

Transferability

The Rappahannock Exchange is a demonstration project. Should it prove to have commercial potential, Conserv will seek venture capital to replicate the Exchange and create Bay-wide bioregional tributary marketplaces to help to further restore the Bay and then, years from now, construct marketplaces in other bioregions of the U.S. and the globe, to help restore ecosystem health of our planet's greatest environmental assets.

Why Here? Why Now?

The Rappahannock River Basin possesses optimum geographic and cultural characteristics for an ecological-economic pilot program. Geographically, 100% of the river basin is contained within one state---simplifying necessary coordination among its various communities. Its geography and demographic characteristics are described below:

Geography

The Rappahannock River Basin is located in the northeastern portion of Virginia and covers 2,715 square miles or approximately 6.8 percent of the Commonwealth's total area. The Basin is bordered by the Potomac-Shenandoah Basin to the north and the York River Basin and Coastal Basin to the south. The headwaters lie in Fauquier and Rappahannock Counties and flow in a southeasterly direction to its mouth, where it enters the Chesapeake Bay between Lancaster and Middlesex Counties. It is 184 miles in length and varies in width from 20 to 50 miles. The Rappahannock River Basin's major tributaries are the Rapidan River (Headwaters in Madison County), Hazel River, Thornton River, Mountain Run, Robinson River, Cat Point Creek, and the Corotoman River.

The topography of the Basin changes from steep to flat as it flows from the Blue Ridge Mountains to the Chesapeake Bay. About 51 percent of the basin land is forest, while pasture and cropland make up another 36 percent. Only about 6 percent of the land area is considered urban. Most of the Rappahannock River Basin lies in the eastern Piedmont and Tidewater areas of the Commonwealth while its headwaters, located on the eastern slopes of the Blue Ridge, are considered to be in the northern and western Piedmont section.

The climate of the basin tends to be moderate with an average annual temperature of 55°F in Culpeper, to 58°F in Urbanna. Extremes below zero and above 100°F have been recorded in the basin. Precipitation ranges from an annual average of 36 inches at the headwaters to 46 inches in the lower Tidewater or Coastal Plain but reaches an average of 48 inches at Big Meadows atop the Blue Ridge. Average annual snowfall ranges from 25 inches on the eastern slope of the Blue Ridge to 10 inches at the mouth of the Basin. The Rappahannock River Basin is divided into two USGS hydrologic units as follows: HUC 02080103 - Rapidan-Upper Rappahannock; and HUC 02080104 - Lower Rappahannock.

(source: www.deq.virginia.gov/wqa/pdf/305b1998/rappahan.pdf)

The Commission itself is also quite unique, even in Virginia. The Commission, since its inception, has served as a forum in which local governments and citizens can discuss issues affecting the Basin's water quality and quantity and other natural resources.

Through promoting communication, coordination and education, and suggesting appropriate solutions to identified problems, the Commission shall promote activities by local, state and federal governments, and by individuals, that foster resource stewardship for the environmental and economic health of the Basin. The Commission is currently in its 11th year. It was created by action of the General Assembly and the member localities.

Demographics

According to the George Washington Regional Commission, the estimated population of the river basin in 2000 was 255,558 persons. That increased to 305,427 by 2006. The

upper portion of the basin contains the Counties of Albemarle, Culpeper, Fauquier, Greene, Madison, Orange & Rappahannock. The middle portion contains the Counties of Caroline, King George, Spotsylvania, and Stafford & City of Fredericksburg. The lower portion contains the Counties of Essex, Lancaster, Middlesex, Richmond and Westmoreland

Now is the Time

The year 2009 is likely to be remembered as the year of the reauthorization of the Chesapeake Bay Act – the year that elected officials, policymakers, scientists, and concerned businesses and citizens realized that a new approach to Bay restoration must be tried.

Chesapeake Bay protection and restoration must also involve the private sector in order to reach the level and scope of progress needed. Emerging markets for carbon sequestration, water quality, wetlands, wildlife habitat, and species protection have great potential to complement existing federally supported conservation efforts and drive private investment to improve the health of the Chesapeake Bay. These markets connect the critical ecosystem services provided by farms, forests, and ranches to beneficiaries who are willing, or required, to pay for their stewardship - such as urban water utilities, industrial polluters, and land developers who must mitigate unavoidable negative impacts to the watershed. Potential income from ecosystem markets provides new incentives for landowners to engage in restoration and conservation activities on their land (Figure 8). Aggregating landowners for entry into markets will lead to collective action across the watershed.

Page 26, Focusing Resources to Restore and Protect the Chesapeake Bay and its Tributary Waters, President's Executive Order on the Chesapeake Bay

This language from President Obama's Executive Order reflects the realization that actual restoration of ecosystem health is impossible without the active participation of economies within a bioregion. It is serendipity that the necessary local and regional groundwork for the Rappahannock Exchange has coincided with similar groundwork at the federal level.

The Plan

Year 1

Task 1: Convene Rappahannock Exchange Symposium and Kickoff

The Rappahannock River Basin Commission has called for a basin-wide gathering on December 9 in historic Fredericksburg to consider the creation of a new bioregional marketplace to help restore the Rappahannock River and the Chesapeake Bay. The purpose of this special symposium, “*Incentivizing Restoration through A Chesapeake Bay Economy*”, is to begin the process of creating the *Rappahannock Exchange*. Participants in the symposium will have the opportunity to shape the development of this historic effort to create the “first of its kind” bioregional economy. The significance of this effort has implications far beyond Virginia’s boundaries. As often before in the development of our Nation, Virginia can be proud of leading the way.

Task 2: Create and staff the Rappahannock Exchange Advisory Council to prepare Exchange framework

To create a sustainable, bioregional economy, the first order of business is to root a new economic platform within a particular ecosystem. Earlier this year, the Rappahannock River Basin unanimously approved an FY 2010 workplan that includes the creation of Exchange. To steer this initiative, the Commission will create an Advisory Council that will serve the Commission for the five year proof of concept demonstration phase of the project. The Exchange will be created to be a self-sustaining commercial enterprise that will continue to serve the communities of the basin after the five year “demonstration” period has expired.

It is expected that approximately 100 persons will serve on the Council, with a little more than half from business sectors and the rest from government and NGO sectors. The Commission will advertise for specific stakeholder types to be filled through an applicant and selection process.

Task 3: Commission consideration and discussion of Basin Restoration Goals

The Commission will consider and discuss the creation of Basin Restoration Goals for the entire Rappahannock River Basin. To assist with this initiative, the *World Resources Institute, People and Ecosystems Program*, has offered research assistance.

Task 4: Develop Rappahannock Exchange Business Plan

Because the Exchange will be created using sustainable economic theory, a hybrid private-public business model will need to be created. A full-fledged business plan will be created for the Exchange by Conserv in consultation with the Rappahannock Exchange Advisory Council. The business plan will include the following information and analyses:

- General Company Description
- Products and Services
- Marketing Plan
- Operational Plan
- Management and Organization

- Financial Statement
- Startup Expenses and Capitalization
- Appendices

The Exchange will be operated as a not-for-profit commercial marketplace containing specific markets linked to regulatory and voluntary environmental drivers. Demand for Exchange products and services will be a function of voluntary transaction marketing and regulatory drivers. Likely product and service demands will be analyzed through the creation of the Business Plan. This focus on ecosystem service demand (in addition to supply protocols), is one of the ways in which the proposed project is unique in comparison to other ecosystem services initiatives already underway in the U.S.

Another key dimension of business plan development will be consideration of win-win relationships with the *Bay Bank*, now under development by *The Pinchot Institute for Conservation*, USFS, and a host of other partners. Rappahannock Exchange partners recently met with Pinchot staff to discuss their assistance with the creation of business linkages between the two initiatives.

The business plan will be completed by the end of Year 1 of the project. This plan is a critical dimension of the proposed project as it will define administrative and legal rights and responsibilities for Conserv and The Rappahannock River Basin Commission. For the Exchange to be fully self-sustaining, it will need to be created to have the operational flexibility of any thriving commercial enterprise to meet changing business demands, while also being integrated with governmental compliance drivers that provide demand for some product and service categories.

Task 5: Creation of Exchange Marketplace Site Map and Design

The Exchange will bring together in a fully functional e-commerce application the following product/service markets within a matrix of the latest Geographic Information System layers, e.g., green infrastructure mapping from the Virginia Division of Natural Heritage, (with new user interfaces designed for use by the general public) available from local and state government agencies:

- Carbon markets
- Nutrient markets
- Biodiversity markets
- Voluntary mitigation markets
- Conservation-based real estate transactions
- Conservation-based transaction of environmental assets (hunting and fishing leases)
- Greenhouse gas abatement and Chesapeake Bay ecosystem friendly products and services

Specialized commercial software will be created to drive unique transaction systems for each market within the Exchange marketplace. Exchange software will allow users (buyers and sellers) to identify in a three-dimensional GIS environment ecosystem

service layers for sale or purchase at a parcel specific scale. It is anticipated that software infrastructure for each market will be created using a web-based systems containing functionalities similar to Craigslist, EBay, and IGive.com, integrated with GIS technology (designed for non-computer savvy user abilities). This item includes incorporation of the Integrated Forest Resource Information System (IFRIS), now being developed by Virginia Tech.

Task 6: Creation of Exchange Marketing Strategy

Robust marketing is a critical dimension of the proposed project. A strategy to properly market the Exchange will be created in the first year of the program.

Year 2

Task 1: Ecosystem Services Council review and supervision of creation of Rappahannock Exchange Marketplace

The Council will utilize the framework created in Year 1 of the project to review and supervise the actual creation of the Marketplace.

Task 2: Development of Exchange software and databases

Private contractors will work with project partners to create the software and databases needed for the functioning of the Exchange.

Task 3: Creation of vendor product and service contracts

Private legal contractors will work with project partners to develop contractual protocols and sample instruments necessary to establish business relationships with vendors, potentially including the Bay Bank, Virginia Nutrient Credit Exchange, Wetlands Mitigation Banking firms, development firms needing stormwater offset projects, and other product and service providers.

Task 4: Creation of Exchange companies or products or services ecological indicator protocols

The Exchange will provide to the general public an ecological indicator system. The indicator will reveal to the public in a consumer-friendly manner how the company, product or service meets Restoration Goal(s). This commercial indicator/benchmarking system will facilitate the use of the Exchange not only as a medium of commerce, but perhaps more importantly as a new cultural phenomenon to measure the sustainability of community economies within a bioregion. It will also help to overcome the mismatches of market inefficiency, through creation of markets especially for conservation-minded buyers and sellers, and will de-fragment market opportunities in buildings and appliances, carbon sinks, and to lesser degrees, power and transportation.

Task 5: Characterization of companies or products or services

Based on the indicator protocols developed in Task 4, Exchange companies or products or services will be characterized/verified to determine ecological indicator ratings.

Task 6: Creation of marketing plan

Based on the marketing strategy developed in Year 1, and the Task 3 business plan, a detailed marketing plan will be created.

Task 7: Launch advertising and promotions

Based on the marketing plan, year end Exchange advertising and promotions will commence to spur demand for Exchange products and services once it is launched in Year 3.

Task 8: Testing and delivery

The beta version of the Exchange website will be delivered to project staff for testing and debugging. By the end of year 2, an Exchange Version I will be delivered for further evaluation.

Task 9: Natural resource manager training

Natural resource managers will be trained to develop and market ecosystem service portfolios for landowners and corporate customers. This will include learning how to market services on the Exchange and other available marketplaces. Training will also include how to quantify credits for sale using the web-based (IFRIS) tool being developed by Virginia Tech and other approved and required inventory methods.

Year 3

Task 1: Exchange Advisory Council reviews operation, revises functionality, and launches Exchange

Early in year 3, the Council will review the functionality of Version I of the Exchange. Council and project investigators will then likely revise the Marketplace to create Version II, launched in the spring of 2012. As with any commercial enterprise, it is expected that transaction volume will increase as marketing begins to penetrate the consciousness of buyers and sellers.

Task 2: Exchange software and database revisions

The Exchange Version I software and databases will likely continue to undergo minor revisions as the system is used in a commercial setting.

Task 3: Exchange monitoring and maintenance

Exchange staff will be needed to run, monitor, and maintain the project. This includes any of the daily business of running the Exchange, including customer service, vendor contract approvals, etc.

Task 4: Marketing implementation and management

This task includes marketing and advertising for the Exchange to spur transactions.

Task 5: On-going identification/verification of companies, products, and services ecological indicators

This task includes on-going identification/verification of new companies, products, and services.

Years 4 and 5

Years 4 and 5 of The Exchange will be concerned with increasing the quantity and quality of transactions for consumers and vendors. A final report will be provided in the last half of year five documenting the findings of the project and offering recommendations for the future of the project.

Resources Needed

It is estimated that approximately 100 of the most entrepreneurial individuals found working within public and private entities that have a personal and/or professional interest in the Rappahannock River and Chesapeake Bay will be needed to work together as members of the Exchange Advisory Council.

Approximately 2.5 million dollars (U.S.) will be needed to fully fund the Exchange for its five year pilot phase. Funds will be used for project design, construction of infrastructure, marketing, operational labor and management, and evaluation.

Major portions of these five-year funds will be used for:

Goal setting, business plan, and project design	\$140k
Ecological Indicator design and product evaluation	\$490k
Ecosystem Services Council staffing	\$145k
Advertising and marketing	\$575k
Software and database development	\$340k
Ecosystem services accounting systems	\$70k
Operations and maintenance	\$490k
Transparency and accountability reporting	\$250k
TOTAL	\$2500k

System deliverables include:

1. Creation of Ecosystem Services Council
2. Creation of Exchange Business Plan
3. Creation of Exchange Marketing Plan
4. Creation of Exchange Environmental Goals
5. Creation of Exchange Ecological Indicator Protocols
6. Creation of Ecosystem Services Accounting Systems and Technologies
7. Creation of Exchange Web-based Digital Infrastructure
8. Creation of Exchange Natural Resource Manager Program
9. Creation of Exchange Retailer Point of Sale Program
10. Creation of Exchange Financial Services Infrastructure
11. Exchange Companies, Products and Services Ecological Indicator Assessments
12. Exchange Advertising and Marketing – 5 Years
13. Exchange Operations and Management – 3 Years
14. Yearly Exchange Assessment and Recommendations Reports

Rappahannock River and Bay Ecosystem Restoration deliverables include:

- New and enhanced Bay-friendly revenue streams associated with enrollment of estimated 30,000 persons in Bay restoration program.
- Yearly landowner payments from revenue streams for the purchase of ecosystem services.
- Associated Rappahannock River Basin and Chesapeake Bay ecosystem restoration resulting from cumulative actions of Bay-friendly transactions.
- A self-sustaining program to improve water quality, biodiversity, reduce CO₂, and meet other environmental goals in the Bay watershed.

The current funding strategy is for the Rappahannock River Basin Commission to procure grants and private contributions from a wide variety of sources. This process has already begun through grant proposals to governmental agencies.

Rappahannock Symposium - December 9, 2009
Morning Group Discussion Summary
(items with * mentioned many times)

- 1) What can make the Chesapeake Bay Economy relevant to you personally, and to your community?
 - Better valuation tied to measurable results (simple, measurable outcomes)- KISS –accurate evaluation from Bay to headwaters*
 - Fair compensation and rewards for landowners*
 - Establish personal responsibility-impact of daily choices on environment "It's the right thing to do" *
 - Changing the negative perception of agriculture—keep agricultural base strong*
 - Emphasize voluntary nature*
 - Education of public and school population*
 - Improve health of the Bay*
 - Bundle Ecosystem Services
 - Exchange must simplify, coordinate, mirror regulation
 - Tie in with tourism, recreation*
 - Tie to local products—certify truly local and "Bay friendly"*
 - Keep costs down
 - Make it more personal-emphasize Heritage, emotional attachments.

- 2) What are your suggestions for improving the project design and work plan?
 - Narrower focus for 5-year plan, prospectus too complex, too large.*
 - Choose restoration goals—focus on a few ideas.
 - Target specific ecosystem services—prioritize areas of watersheds by land use.
 - Educate in communities: churches, community organizations, schools.*
 - Break committee into sub-groups...committee too large.*
 - Simplify*—focus on positive*—remove jargon.
 - Involve at least 50% private business (banks, COOPs*, utilities*)
 - Learn from previous eco-trading experiences.*
 - Branding very important.*
 - \$2.5 million is not enough.
 - Get tax incentive for corporate involvement.
 - Tax non-enviro friendly products
 - Must have clear goals and measurable outcomes**
 - Work with corporate partners for marketing \$\$, and consumer education.*
 - Accountability, transparency, benchmarks.*
 - Provide recognition for work done to improve watershed.*

- 3) What are your questions and thoughts about this project?
- Favor project—how can we help?*
 - Committee too big—flow chart too complicated.**
 - How can we develop and keep momentum?*
 - Needs to be a mechanism for trademark certification.*
 - Branding is essential** and needs to be connected to personal meaning.
 - How will you allocate funds through: Upper, Middle, and Lower basin?
 - Is Exchange a "non-profit"?
 - Who collects monitors, and distributes funds?*
 - Is the watershed big enough for this to be economically viable?*
 - How will it be evaluated?*
 - How will "Bay Friendly Products" be competitive? Need to be same price or cheaper.*
 - How will it survive economic downturns—cycles?
- 4) What persons, businesses, and organizations would make a valuable contribution to the creation of the business plan?
- Farmers*
 - Small businesses*
 - Community service organizations (Chambers of Commerce*, churches*)*
 - Home owners associations*
 - Friends of the Rappahannock
 - Farm Bureau*
 - Real estate and home builders associations*
 - Tourism* and Economic Development offices*
 - Government regulatory agencies (Army Corp, DCR*) plus VA Coop Extension* and Dept. of Forestry.*
 - Local government-Boards of Supervisors*
 - Ducks Unlimited
 - Lobbyists
 - K-12 Schools*
 - Utilities (Rappahannock Electric Coop)*
 - Piedmont Environmental Council
 - Planning District Commissions
 - Bill Shobe-Weldon Cooper Center (UVA) Darden School of Business (UVA)
 - Joe Daniels
 - Watermen in the rivers, estuary, and Bay*
 - Media—newspapers, radio, TV, Internet*
 - College student groups

5) What seems important as a take away from this discussion?

- Keep diversity*
- Keep momentum*
- It should work
- Need private sector
- Need clear indicators of success or failure.*
- Supports "quality of life"*
- Emphasize rural benefits.
- Not Tax dollars to drive this.**
- Do a few things well...not a lot poorly.
- Concentrate geographically.
- Education—behavior modification essential.*
- Too complex—break into smaller pieces.*
- Clarify revenue stream—simplify flow chart.**
- Should not be "regulatory driven.*
- Start small...get working pilot, then "Market the hell out of it!" *

Rappahannock River Basin Symposium: Afternoon Breakout

Participants were asked to list Internal and External strengths and weaknesses of the proposed Rappahannock Exchange during a facilitated afternoon group discussion. The following information is a synopsis of the responses from the fifteen small group discussion tables.

Internal Strengths:

- The Rappahannock Exchange is a compelling vision that links the public and private sector in a new way for a good cause.
- It's "out of the box".
- It's a new restoration revenue source.
- There is a good end result.
- There is an existing audience and a diversity of stakeholders.
- The source of funding is voluntary, not tax-based.
- It is an alternative to regulatory systems of implementation.
- There are opportunities for new partnerships.
- The timing is good-legislators are on board and there is increased concern about the needs of the Bay (due to TMDL, and other factors)
- The Rappahannock Basin is distinct and easily targeted.
- It's the most efficient solution at this time.
- It is market based and marketable.

- Ecosystem Services concept is "doable".
- Creates vehicle for marketing local products—bioregional awareness.

Internal Weaknesses:

- Time table too long.
- Risk—Uncertain funding stream- startup \$\$\$ source? (how to move from grant funded to self-sustaining).
- Too complex, committee too large—simplify project/process
- Need transparency → accountability
- Lack of information about internal structure
- Difficult to understand Exchange as a business
- Depends too much on retail sales for revenue
- Lots of competition for same \$\$\$'s
- Lack of measurable goals
- No control over demand for products.

External Strengths:

- Tie into "Bay Health" push. Public policy support (TMDL).
- Close to D.C.
- Great timing: Green Revolution, increased public awareness in the environment.
- Local benefits—people are looking for incentives to help budgets.
- First of its kind, new approach may attract funding
- Good chance for a "corporate buy-in".
- Intrinsic increase in value of ecosystem services as forest/ag land decreases
- Possible tax credits for "Green Markets"

External Weaknesses:

- Cyclic economy—sustainability of constant funding, uncertainty of demand
- Too tied (confined) to regulatory functions of government-possibility of "over regulation"
- Steep market competition/"Green market" saturation → Global competition
- Complex new idea in juxtaposition with complex regulations=difficulty
- Regional differences in "conservation ethic"
- TMDL deadlines
- Need to delineate long-term oversight
- How do you correctly value the resources.
- Political change

- Population increase
- Perception "it already too late"
- Distrust of private sector by environmentalists
- Companies might try to use Exchange to avoid regulations