

## **A Success Framework for the Prettyboy Resource Collaborative**

***The intent of this working document is to help frame the problem/opportunity landscape for the legal/business team & the PRC Steering Committee by asking and answering key questions:***

- 1. Why is the PRC being formed?***
- 2. What is the unique value proposition of the PRC?***
- 3. What is the charge to the legal/business team?***
- 4. Who are the PRC core customers?***
- 5. What are the shifts in landscapes and resource management practices that we want our customers to make?***
- 6. How can the PRC incentivize, facilitate, aggregate and track these shifts?***
- 7. What is the regulatory/political environment?***
- 8. Who are the key stakeholders that comprise the PRC business ecosystem?***
- 9. How does each stakeholder gain from and give to the PRC business ecosystem?***
- 10. When should different proposed actions/solutions be implemented?***
- 11. How will the PRC become self-sustaining?***

***Answering these questions will help focus their and our efforts to grow the PRC and ensure its success.***

***Offered by Joe Abe***

***Find Your Niche, LLC***

***Founding Member of PRC Steering Committee***

## ***1. Why is the PRC is being formed?***

**PRC Purpose: We develop, market and provide eco-smart resource management solutions to serve individual and collective needs while advancing the health and sustainability of the Prettyboy watershed ecosystem.**

(working draft 3.0)

### Definitions:

“Eco-smart” means economically and ecologically intelligent, healthy and viable.

“Ecosystem” means both natural ecosystem and regional living economy.<sup>1</sup>

## ***2. What is the unique value proposition of the PRC?***

### **Need and Opportunity Landscape**

Shifting toward ecologically healthy landscapes and management practices can offer a multitude of monetary and nonmonetary benefits to farm, forest, and other landowners within watersheds as well as water customers, stewardship advocates, recreational users (boaters, hikers, birders, fishermen), the forest industry, agriculture, and state and local government. These ecosystem-enhancing resource management approaches yield traditional value streams such as timber, recreation and farm products in addition to other ecological services such as water purification, habitat, climate moderation, flood mitigation, soil and water conservation, and improvement of regional air quality. Importantly, these beneficial impacts often ripple well outside the area where the ecological land management practices are applied. This includes safeguarding downstream water quality and supply, sediment reduction, flood control, regional economic values of forests and farmland, and contributions to the restoration of the Chesapeake Bay.

To realize these multiple and far-reaching private and public benefits, there is a need to to develop, test and evaluate business approaches that incentivize, facilitate, aggregate and track shifts to ecologically healthy landscapes on forest, farm and rural residential properties to contribute to the provision of

---

<sup>1</sup> <http://joeabe.com/blog/the-big-shift/>

marketable ecosystem services. There is a related need to translate these landscape enhancements into the context of broader watershed.

### **PRC Value Creation**

The PRC will create value for landowners by:

- Integrating Services and Markets
- Reducing Costs
- Generating Income

### ***3. What is the charge to the legal/business team?***

The business and legal team is charged with helping the PRC Steering Committee develop, test and evaluate sustainable business models that:

- Meet the needs of our customers (forest landholders, farmers and rural residences) via income, cost savings, and integrating services and markets
- Aggregate value chain links to meet customer and other stakeholder needs for each project and tap the PRC's collective talents and strengths
- Incentivize, facilitate, aggregate and track shifts to ecologically healthy landscapes and resource management practices
- Help link resource-fragmented, parcelized landscapes (characteristic of the Chesapeake Bay watershed) and underused (or unused) resources to help grow a healthy and sustainable Prettyboy watershed ecosystem
- Integrate with our initiatives supported by the PRC (such as research grant RFP via the Hughes Agro-Ecology Center, DNR Forest Service and MDA support)
- Identify obstacles and potential solutions related to the success of the PRC.

### ***4. Who are the PRC core customers?***

Rural Residences – Many private landowners living within the Prettyboy reservoir watershed have parcels ranging from 3 to 10 acres and often mow extensive tracts of grass surrounding their homes at considerable expense and/or time. Further, they tend to fertilize and apply pesticides (another expense) to maintain these extensive manicured lawns to the extent that they contribute nutrient and pesticides into Baltimore's drinking water system. These lawns also have little or no value in terms of habitat, water retention and recharge, and carbon sequestration, especially when compared to diverse forest ecosystems.

The mowers, blowers and other equipment also contribute to the Baltimore region's air quality problem. When aggregated, this customer base represents X% of the total area of the Prettyboy reservoir watershed.

Forest Landholders – Many private and public landowners hold and/or manage forested lands that range in size from x to y acres. These forests often lack the qualities of healthy, regenerative forest ecosystems because of historic clear cutting practices, overpopulation of deer, and the introduction of invasive species and disease. Healthy forests include a diverse portfolio of tree species featuring oak, hickory, tulip poplar, hemlock, pine, dogwood, and....

Farmers – Farms within the Prettyboy reservoir range in size from x to y acres and include traditional corn, soybean, and other commodities as well as horse farms..... The comprise about z % of the total watershed area. Many farmed lands are leased from nonfarming landholders, with the ratio being about 2 acres leased to each acre owned by farmers. Income per acre ranges from x to y \$/acre with --- and --- being the dominant income producers. The degree to which excess nutrients, sediments or pesticides impact the local watershed ecology depends largely on how a farm is managed or not managed properly.

### ***5. What are the shifts in landscapes and resource management practices that we want our customers to make?***

#### Rural Residences

Turf-to-Trees Program: Baltimore County already has a turf-to-trees program in place that appears to be working with this customer group. Some projects are working better than others. Find out details from Don Outen. One of the pressing needs is to secure an ample supply of tree seedlings for these reforestation efforts. This is also a substantial opportunity for willing landowners inside and outside the Prettyboy reservoir watershed.

The goal is to shift from expensive-to-maintain, large manicured lawns to income producing forested landscapes with minimal lawns close to home. This reduces costs and time associated with “mindless mowing” for the landowner while reducing water-related pollution and runoff, air pollution, and soil erosion and increases habitat, the homeowner's privacy, and potential income from ecological services created. Currently Baltimore County is facilitating reforestation through technical support and maintenance.

#### Forest Landholders

Forests that exist on properties are largely regrowth from past clear-cutting and tend to favor fast growing species such as tulip poplar over more habitat-enriching trees such as oak, hickory, and walnut. Much of this forest is fragmented, lacks a healthy layered canopy and species diversity, is prone to deer overpopulation, invasive species and disease, and has lost most of its regenerative capacity. Importantly, if these conditions persist, substantial stands could suddenly die off, a situation that would undermine the economic, social and ecological value of the forests and degrade ecosystem services.

The goal is to shift from unhealthy forest stands to more diverse, resilient and healthy forests while generating income, cutting costs through cost-sharing, aggregating fragmented parcels, increasing ecological services, and building sustainable supplies of timber and wood products. The first step is to help the landowner obtain a forest stewardship plan from the DNR Forest Service that opens up several win-win opportunities. The landowner becomes eligible for a tax break for forest conservation and can take steps to improve his/her forest stand by harvesting deer (including out-of-season hunting), forest thinning and removing invasive species and diseased trees. By working collaboratively with other forest landowners, less desirable and diseased trees would be removed making room for oak, hickory and other species that contribute to a healthier, more diverse forest. This removed wood might be used for timber, firewood, pulp, mulch and artisanal woodworking.

### Farmers

The types of farms, topography and location, farming and resource management practices can significantly impact how each farmed parcels impact a watershed. (add more here)

The goal is to shift to more sustainable, diverse farming within the watershed to yield higher value for farmers through higher incomes from multiple value streams including traditional crops, value-added products sold to local and regional customers, fees received for nutrient reductions from riparian buffers (including forests and grasses such as switchgrass), and income from sale of wood, energy, and other resources, and fee-for-use for hunting and habitat creation.

## ***6. How can the PRC provide integrated solutions that encourage eco-smart resource management to serve individual and collective needs?***

As a network of state and local government, business, industry, nonprofit and citizen stakeholders, the PRC can join different activity links in the value-creation chain to support each project's needs. For instance, with forested properties, a key first step is to develop a forest stewardship plan. This plan gives property owners a tax deduction and the opportunity to thin the forest, control deer and manage invasive species and disease. Wood removed from this managed forest can yield timber, pulp, firewood, wood pellets, and

mulch. Executing these and other steps in the right sequence involves a diverse skills and resources that the PRC can uniquely integrate for its customers.

PRC can entice customers to pursue eco-smart resource management projects by offering income, reduced costs through cost sharing, and unique bundling of value-creating activities tailored to each customer's needs. This includes obtaining forest stewardship plans, converting turf to trees through technical assistance and initial maintenance, securing lower costs and access not available to individual landowners, and assisting with market development and marketing for traditional products and nontraditional products such as ecological services and nutrient trading.

It is important to note that controlling deer populations also yields significant benefits beyond the individual landowner: reduces vehicle accidents, transmission of lyme disease, and prevents starvation and disease outbreaks among deer. At the very least this is another selling point of the PRC's work. The degree to which these benefits can be monetized remains unclear at this time.

PRC can help aggregate currently fragmented parcels to enhance both the ecological and economic value of land within the watershed yielding benefits to landowners, farmers, foresters, nonprofit groups, the forest industry, state and local governments and the public. This includes linking previous fragmented lands to support provision of ecosystem services and creating closed-loop economic opportunities such as venison to support the poor and local restaurants, wood-to-energy and nutrient and carbon capture in soils and forests.

Importantly, PRC can evaluate and track shifts to both ecologically healthy landscapes as well as the shift to a regional living economy where waste becomes wealth and people see and develop the connection between economic, social and ecological well-being. The PRC should also hold itself accountable by tracking its ability to leverage positive change and be clear what activities yield the most benefits to its stakeholders and how it might improve its effectiveness and influence over time.

## ***7. What is the regulatory/political environment?***

The current regulatory/political environmental often pits environmental protection/restoration against economic growth and private rights of landowners, agriculture, and developers. This false and misleading win-loose framing of economy versus environment is most visible in the use of "rain tax" in many media discussions regarding the Chesapeake Bay clean up. The PRC has the potential to reframe the public

discussion by offering a breakthrough model for watershed protection and restoration and sustainability: shifting from tax burden to getting paid for provision of ecological services and nutrient trading.

Historically, point sources of pollution such as wastewater treatment systems were improved to reduce wastes and pollution from entering the Bay and its tributaries. With some success in controlling obvious point source discharges, nonpoint sources from urban, suburban and rural landscapes have continued to be a problem. The failure of voluntary actions to address nonpoint pollution led to the development of a strict pollution diet, the Total Maximum Daily Load (TMDL).<sup>2</sup> The premise for using 8-digit HUC-scale<sup>3</sup> watersheds is that the regulatory framework for environmental restoration and pollution reduction has been established as such through the Clean Water Act's TMDL<sup>4</sup> program. For a great summary of the current situation with the Bay Restoration challenge and the Clean Water Act, please see

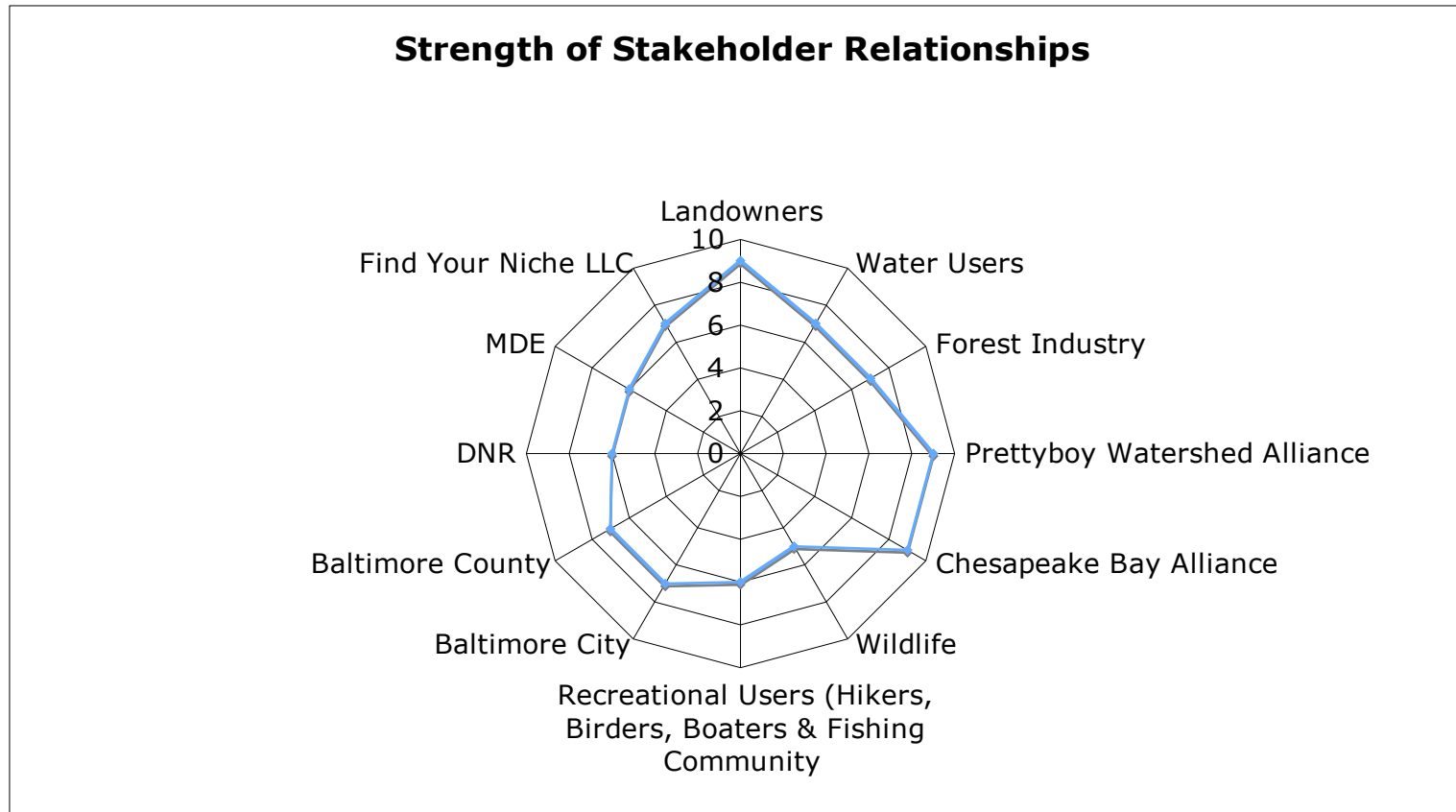
[http://www.choicesmagazine.org/magazine/pdf/cmsarticle\\_330.pdf](http://www.choicesmagazine.org/magazine/pdf/cmsarticle_330.pdf)

---

<sup>2</sup> Total Maximum Daily Load assigned as the "pollution diet" assigned to an impaired waterbody the restricts the quantity of Nitrogen, Phosphorus and Sediment. Note: Pollution is often a misplaced resource.

<sup>3</sup> HUC is the Hydrologic Unit Code See <http://water.usgs.gov/GIS/huc.html>

**8. Who are the key stakeholders that comprise the PRC business ecosystem?**



*Points plotted along each stakeholder axis reflect the two-way relationships – a combined measure (fictitious scores shown here) of the value given to and received from participating stakeholders in the PRC business ecosystem. Optimizing stakeholder relationships*



Copyright Joseph M. Abe 2016-2017 All Rights Reserved.

*(moving to toward the outermost circle) helps maximize sustainable value (see table pages 10 & 11 to see how each stakeholder contributes to and receives from the PRC).*

### **What is a Business Ecosystem?**

*“A business ecosystem is a dynamic community of companies and other ‘organisms’ that echoes natural systems. Cyclical and mutually beneficial relationships develop within and among firms, institutions and communities to share vital resources and commercial flows such as money, energy, materials, information, water, food and people. Surplus flow from one entity is a valuable resource for another.”*

[Business Ecology: Giving Your Organization the Natural Edge, 1998](#)

By Joseph M Abe., Patricia E. Dempsey, and David A. Bassett

*“An economic community supported by a foundation of interacting organizations and individuals—the organisms of the business world. The economic community produces goods and services of value to customers, who are themselves members of the ecosystem. The member organisms also include suppliers, lead producers, competitors, and other stakeholders. Over time, they coevolve their capabilities and roles, and tend to align themselves with the directions set by one or more central companies. Those companies holding leadership roles may change over time, but the function of ecosystem leader is valued by the community because it enables members to move toward shared visions to align their investments, and to find mutually supportive roles.”*

[The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems](#), 1996

By James F. Moore

**9. How does each stakeholder gain from and give to the PRC business ecosystem?**

<b><u>Stakeholders</u></b>	<b><u>How They Stand to Gain</u></b>	<b><u>How They Contribute Value</u></b>
<b>Landowners</b>	<b>Services, Income, Healthier, More Valuable Land, Lower Cost, Privacy</b>	<b>Sustainable Land, Forests and Farms=Greater Ecological Services</b>
<b>Water Users</b>	<b>Secure Supply of Clean Water</b>	<b>Money for Water Services</b>
<b>Forest Industry</b>	<b>Sustainable Supply of Timber, Pulp &amp; Wood Byproducts; More Customers</b>	<b>Assess, Harvest, Process and Sell Timber, Pulp &amp; Wood Byproducts</b>
<b>Prettyboy Watershed Alliance</b>	<b>Engage Public in Resource Protection &amp; Stewardship, Funding</b>	<b>Relationships with Private Landowners, Advocacy &amp; Education</b>
<b>Chesapeake Bay Alliance</b>	<b>Replicable, Incentive-Based Model for Working Landscapes That Restore Watershed Ecosystems, Funding</b>	<b>Funding, Technical Support, Advocacy &amp; Education</b>
<b>Wildlife</b>	<b>Habitat</b>	<b>Contribute to Ecological Services and Ecosystem</b>
<b>Recreational Users (Hikers, Birders, Boaters, Fishing Community)</b>	<b>Recreational Space, Fun and Experience</b>	<b>Advocacy, Use Fees</b>
<b>Baltimore City</b>	<b>Secure, Low \$, High Quality Water Supply</b>	<b>Manage Dam, Reservoir, Adjoining Forests, and Water Supply System</b>
<b>Baltimore County</b>	<b>TMDL, WIP Compliance, Healthy Forests</b>	<b>Manage Forests, Resource Assessment, Public Outreach, Training</b>
<b>DNR</b>	<b>Sustainable Forest, Healthy Watersheds, Bay Restoration/TMDL</b>	<b>Resource Assessment/Plans, Funding &amp; Access to Tax Credits, Funding</b>
<b>MDA</b>	<b>Sustainable Farms, Nutrient Trading/Bay Restoration</b>	<b>Nutrient Management, Technical Assistance, Funding</b>
<b>MDE</b>	<b>TMDL, Bay Restoration, Clean Air &amp; Water</b>	<b>TMDL/BMP Approval, Funding and Nutrient Trading</b>

<b><u>Stakeholders</u></b>	<b><u>How They Stand to Gain</u></b>	<b><u>How They Contribute Value</u></b>
<b><i>Find Your Niche LLC</i></b>	<b><i>Demonstrate Business Ecology Success Model</i></b>	<b><i>Framework for PRC Development &amp; Comprehensive Success Profile</i></b>
<b><i>Business/Legal Team</i></b>	<b><i>Education/Experience/Contribute to PRC Cause</i></b>	<b><i>Business Planning &amp; Development</i></b>

### ***10. When should different proposed actions/solutions be implemented?***

A number of projects have been discussed by the PRC steering committee that might be used to demonstrate the value of the PRC, such as deer management, reforestation of rural residential properties, cost-sharing of invasive plant control, and generating income from wood and byproducts. While it is important to get things done on the ground as soon as possible, these activities must be done in manner that achieves the goals, interests and expectations of the various stakeholders to ensure the success and sustainability of the PRC. At the present, the following sequence seems to make sense:

1. Reforestation of rural residence is an existing program that can be used to show immediate results and well as provide valuable lessons. However, there is a shortage of seedlings for the key species such as oak, hickory, and beech. Filling this need is a business opportunity for an entity inside or in the vicinity of the Prettyboy reservoir watershed.
2. Improving existing forested properties should include identifying properties that have already developed forest stewardship plans and working with these landowners to find out their needs and focus our projects such as deer control or forest thinning. Use connections with these forest landowners to attract neighboring forest landholders to grow PRC membership and link parcels.
3. Consider opportunities for farmers to grow native trees, switchgrass and other native plants to absorb nutrient, create habitat and generate revenues through nutrient trading and plant sales.

## ***11. How will the PRC become self-sustaining?***

While a number of grants have been secured or being sought the PRC should view this money as start-up capital. Three years out, how can the work performed by the network of entities ultimately become self-sustaining?

For instance, water users in New York City support land conservation in the upper reaches of the watershed serving the City by paying property owners to manage and conserve their lands in ways that protect water quality and sustain habitats. Forests and farms upstream today not only protect the water supply, they also provide food, recreation, flood control and other benefits. Could a similar business model work in the Baltimore regions since the Prettyboy reservoir is a part of a reservoir system that supplies water for 1.8 million Baltimore City and Baltimore County residents?