

Trust for a Clean Water Economy *Rappahannock Watershed*

*A Systems Approach to Bay Restoration
2011-2020*

*Presentation to the
Virginia Water Commission
January 10, 2011*

Rappahannock River Basin Commission
in partnership with
Conserv

Presentation

- System Introduction
- System Architecture
- System Process
- System Revenue
- System Testing
- Timeline

System Introduction

The Problem

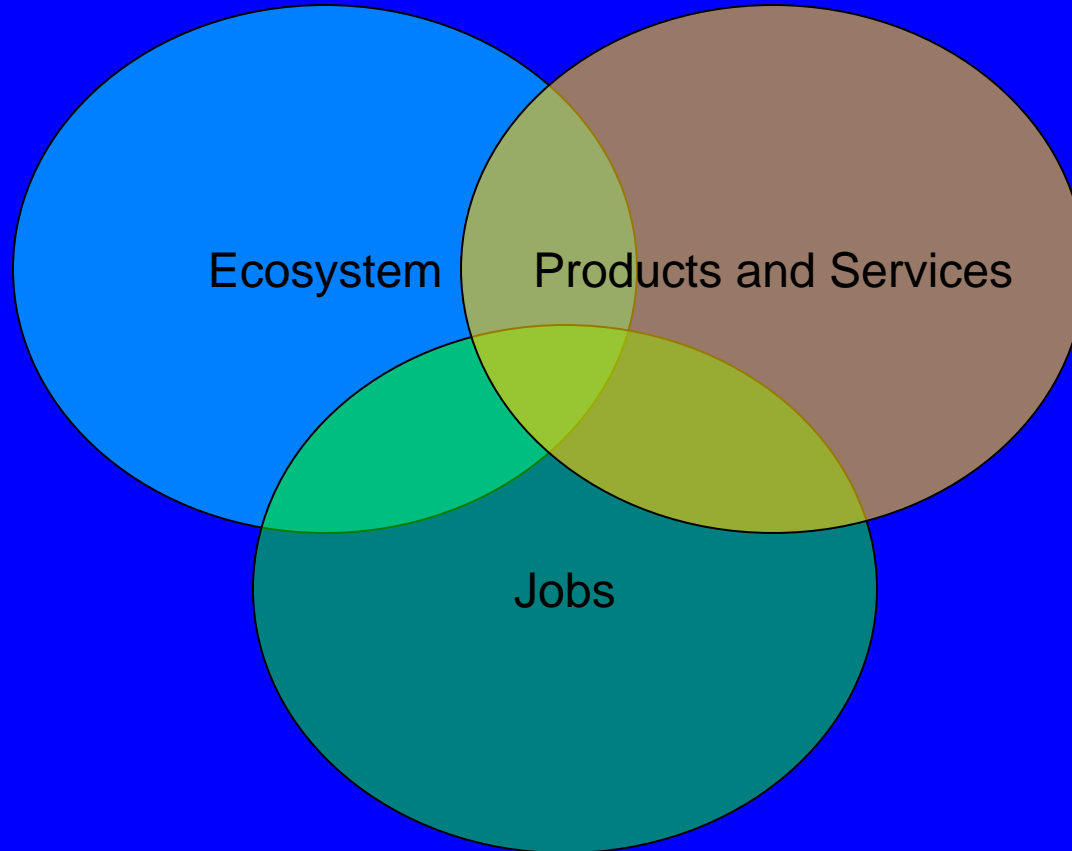
Bay degradation is caused by institutional disconnect between our human economy and nature.

The Solution

A re-coupling between the human and natural economies.

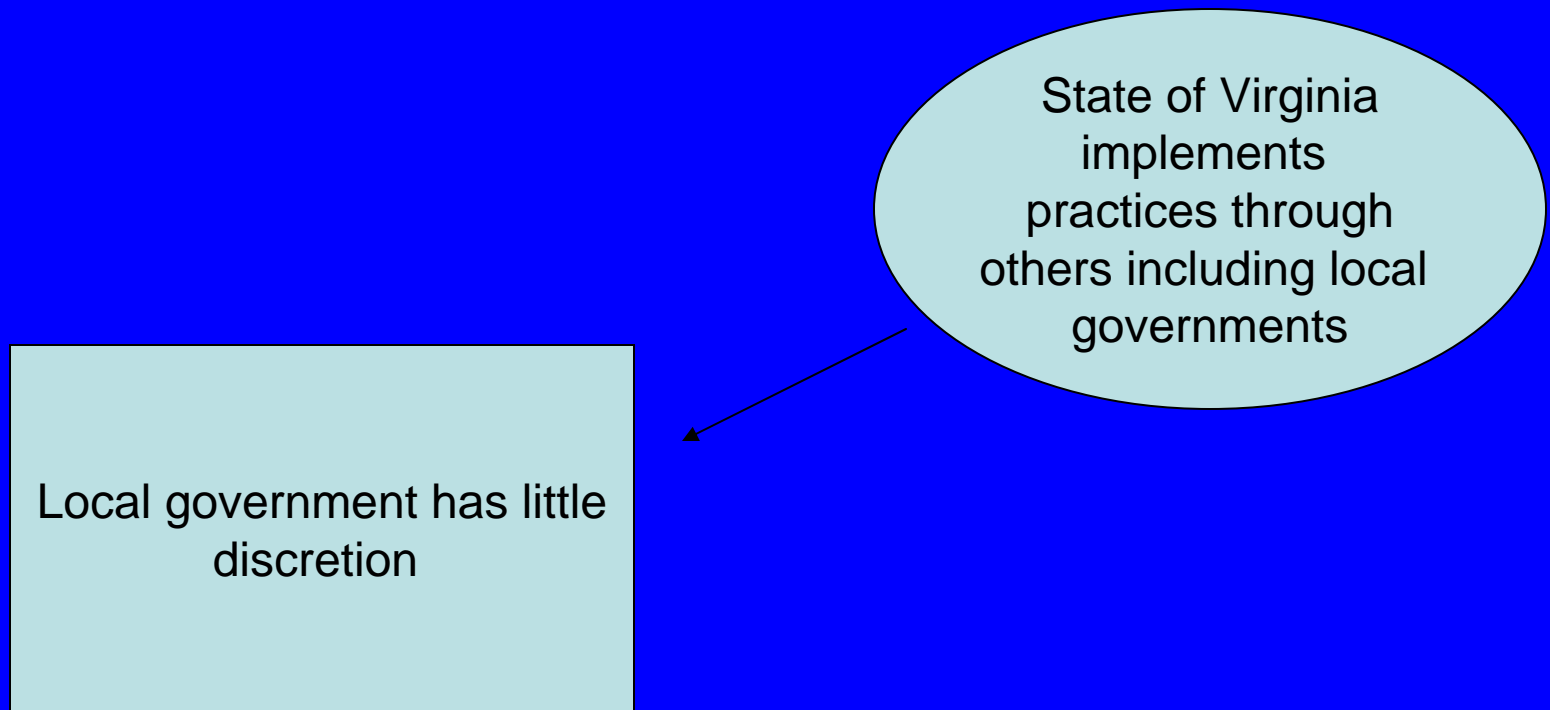
A proper coupling Enterprise is needed.

What does the Enterprise Couple?



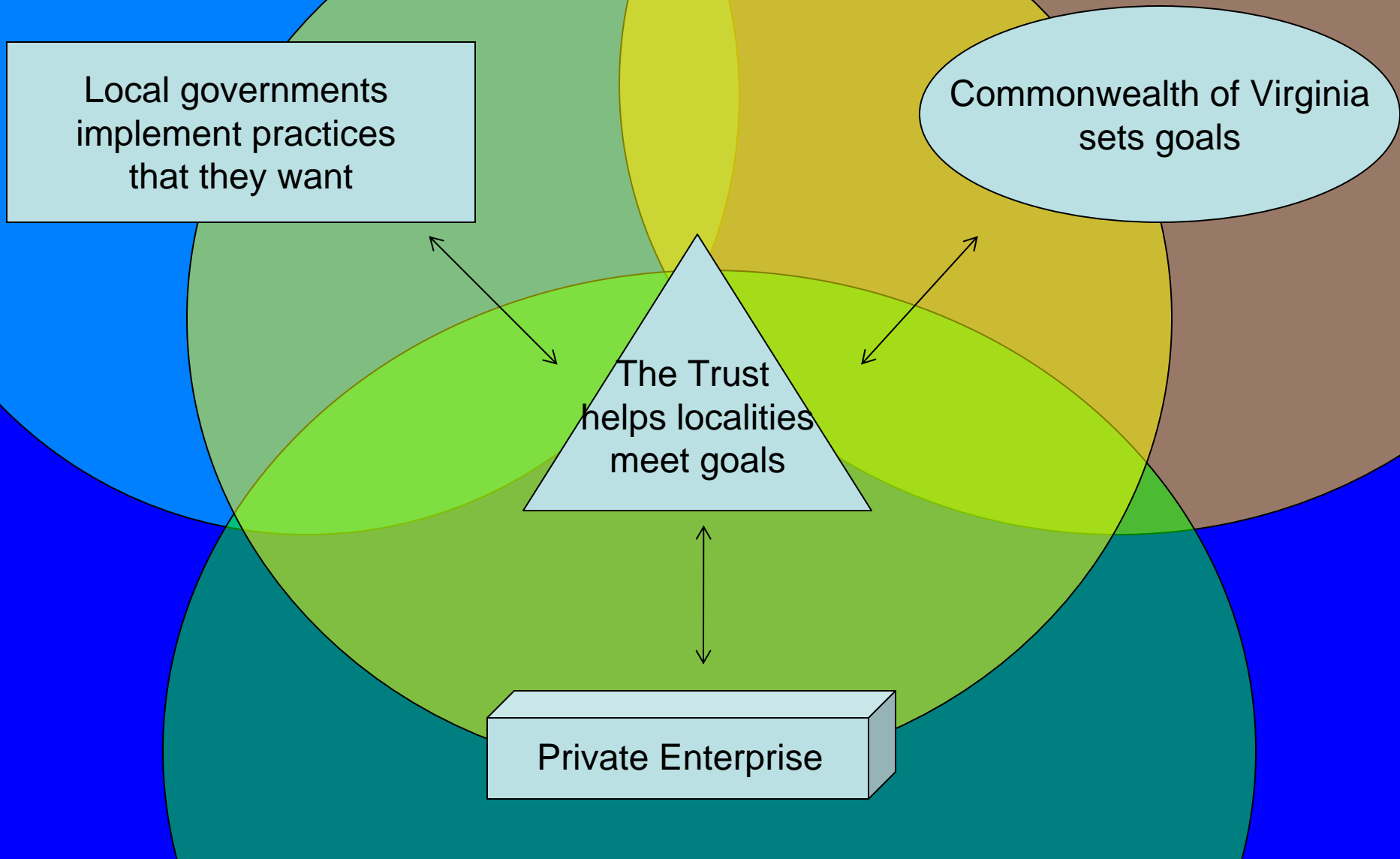
Current Paradigm

In response to federal mandate



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A Different Paradigm?



Enterprise Mission

The Trust for a Clean Water Economy (The Trust) provides government and corporations environmentally efficient pollution prevention/reduction solutions, essentially a...

Watershed Bank.

The Trust is incentivized through the reductions that local governments and corporations achieve.

It is a contractor whose contract can be revoked if there is failure to perform.

Trust Organizational Structure

A watershed-based not-for-profit organization.

The Trust Objective

The Trust creates a market for cost-effective pollution reduction solutions.

The Trust Methodology

The Trust uses “market-like mechanisms” to facilitate the implementation of cost-effective pollution reduction solutions.

System Architecture

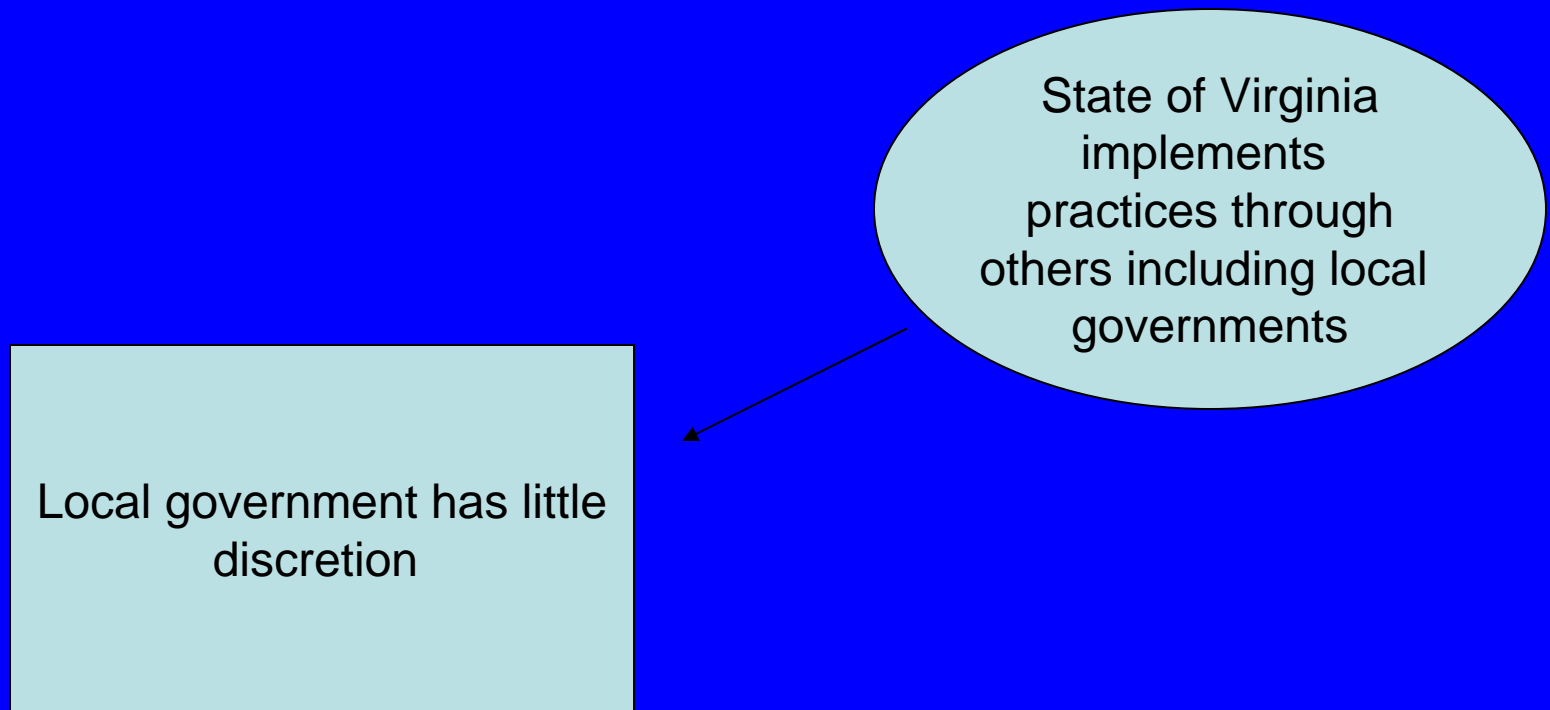
Elements

1. Market-friendly Baselines
2. Fully Capped Bubble Market
3. Capped at Local Government Scale
4. Source sector Cooperatives
5. Pollution banking
6. Natural Capital Brokers
7. Watershed Friendly Certifications
8. Monitoring
9. NPDES group based compliance
10. Market-friendly state and federal enabling legislation

System Process

Current Pollution Reduction Process

In response to federal mandate



#1

Trust conducts Local Government Pollution Accounting and Auditing

- Budgeting and performance evaluation
- Certification of pollution reduction
- Advising on tax impacts (conservation easement)

#2

Trust Markets *Rappahannock*
Friendly Certifications

#3

Rappahannock Friendly projects are certified by the Trust (through modeling and/or monitoring) to provide specific pollution reduction performances

#4

Trust develops variable length
pollution reduction credit
contracts with watershed friendly
providers of products and
services

#5

Local Governments (and others)
purchase cost effective and
politically-acceptable pollution
reduction projects...

some of which are provided by
The Trust.

#6

Trust tracks purchases of
Rappahannock Friendly products
and services made by local
governments and others

#7

Commonwealth audits Trust

#8

Commonwealth enforces
reductions when failure to meet
pollution reduction goals

System Revenue (Market Prototypes and Testing)

Market 1: Federal Highways

- Project: Fredericksburg Area Metropolitan Planning Organization New Toll Road
- Hypothesis: Commuters should pay for the pollution impacts they create.
- Revenue Flow: From commuter to rural landowners.

Market 2: Urban Areas

- Project: City of Fredericksburg-Caroline County Stormwater Offset Trading
- Hypothesis: Purchase of nutrient reductions through conservation is more cost effective than on-site stormwater retrofit
- Revenue Flow: From city residents to rural landowners.

Market 3: Water Supply Watersheds

- Project: South Fork Rivanna River Forests to Faucets (F2F)
- Hypothesis: Natural infrastructure is more cost effective method to reduce sediment and nutrients than built infrastructure
- Revenue Flow: Urban water consumers to rural landowners

Market 4: Suburbs

- Project: Rappahannock – Friendly Lawn Design and Certification
- Hypothesis: Lawn nutrient reductions are more cost effectively achieved than stormwater retrofit reductions
- Revenue Flow: State Tax Credits for Design, Implementation, and Testing of Rappahannock – Friendly Yards

Emerging Projects

- Federal Lands – Military Installations (in partnership with Public Policy of Virginia)
- Other Innovative Corporate/Personal Responsibility

System Testing

2011

- Conduct simulations of Trust architecture
- Determine optimum architecture
- Develop Implementation Plan for 2012

Timeline

Phase 1 (2011) - Proof of Concept

Phase 2 (2012-2013) - Trust Demonstration

Phase 3 (2014-2017) - Trust Commercial
Operations I

Phase 4 (2017-2020) - Trust Commercial
Operations II

Proposed Pollution Reduction Process

