PROGRAM DESIGN
HOW DO YOU BUILD IT?

ACES PRE-CONFERENCE WORKSHOP
December 10, 2012
WORKSHOP GOAL

• Understand the process to efficiently develop a performance-based program
• Identifying the common questions
• Define necessary products
There is growing interest and recognition in performance-based approaches to conservation.

However, many program developers get stuck trying to answer the question,

“How do we do this?”
The Answer

It’s not that hard.
Environmental Incentives and Willamette Partnership have developed a four stage approach for efficiently developing markets.

Each stage addresses the relevant **people**, **policies**, **environmental** considerations, and the **playbook** which brings it all together.
Why do we want to have environmental accounting in the first place?
PROBLEM: NET LOSS OF HABITAT EACH YEAR DESPITE $20 BILLION IN SPENDING

Habitat lost to development

Mitigated through non-banking actions

Farm Bill & regional programs

Private non-mitigation

Public land mgt

Net loss

Numeric values are rough estimates for illustration only
VISION: PERFORMANCE BASED INVESTMENT

Habitat lost to development
Mitigated through banking
Mitigated through non-banking actions

Numeric values are rough estimates for illustration only
Theory of Victory: Transformation

Building Blocks

Regional Standards

Proliferation

Operate at Scale

Building Block Markets with Active Investments

Regional Markets Proliferate Using Standard Infrastructure

National Markets Operate at Scale
Theory of Victory: Transformation from Net Habitat Loss to a Restoration Economy

Building Blocks | Regional Standards | Proliferation | Operate at Scale

Volume of Performance-based Investments ($billions)

Acres of Functional Habitat Change (millions)

Numeric values are rough estimates for illustration only
Traditional Offsets
Environmental Accounting
Three Keys to Success

Ecosystem Markets

• CLEAR DEMAND: Law/regulation, businesses, or funders that are on board

• CLEAR PATH: Approved standards and protocols for measuring ecosystem services and implementing credit-generating projects

• CLEAR RISK: Third parties willing to finance and deliver compliance-grade projects
What are the necessary components of each development step?

PROGRAM DESIGN OVERVIEW: HOW DO YOU BUILD IT?
PROGRAM DEVELOPMENT STAGES

Program Development Stages

EXPLORATION - SITUATION ANALYSIS & FEASIBILITY → PROGRAM DESIGN → PILOT TEST & BUILD OUT → PROGRAM OPERATIONS
Program Development Stakeholders

**EXPLORATION - SITUATION ANALYSIS & FEASIBILITY (RAPID)**

**PROGRAM DESIGN (RAPID)**

**PILOT TEST & BUILD OUT (ROBUST)**

**PROGRAM OPERATIONS (ONGOING)**

Working Group
- Coalition of the Willing & Inspired

Development Team
- Dedicated Staff
- Experts
Program Development Stakeholders

**Exploration - Situation Analysis & Feasibility (RAPID)**

**Program Design (RAPID)**

**Pilot Test & Build Out (Robust)**

**Program Operations (Ongoing)**

**Stakeholders**

- Working Group
  - Coalition of the Willing & Inspired

- Development Team
  - Dedicated Staff
  - Experts

- Future Participants
  - Project Developers
  - Investors
  - Administrators
  - Tech Service Providers
Program Development Stakeholders

- Exploration - Situation Analysis & Feasibility (RAPID)
- Program Design (RAPID)
- Pilot Test & Build Out (ROBUST)
- Program Operations (ONGOING)

Stakeholders:
- Working Group ➔ Governing Body
- Development Team ➔ Administrator
- Pilot Participants:
  - Project Developers
  - Investors
  - Administrators
  - Tech Service Providers
Program Development Stakeholders

**EXPLORATION - SITUATION ANALYSIS & FEASIBILITY (RAPID)**

**PROGRAM DESIGN (RAPID)**

**PILOT TEST & BUILD OUT (ROBUST)**

**PROGRAM OPERATIONS (ONGOING)**

- **Stakeholders**
  - **Participants**
    - Project Developers
    - Investors
    - Administrators
    - Tech Service Providers

- **Governor Body**

- **Administrator**
Components of an Environmental Accounting Program

**PEOPLE**
- Investors/Buyers
- Credit Producers/Sellers
- Policy Makers
- Program Managers
- Stakeholders

**ENVIRONMENT**
- Environmental Benefit (Credit) Calculator
- Field Guide & Forms
- Registry Platform

**POLICIES**
- Funding Guidelines
- Offset Requirements
- Water Quality Compliance
- Avoided Cost
- Climate Adaptation
1. EXPLORATION

What is environmental accounting and why how can it help us?

Should we develop a program?

How is this program going to work, and how do we develop it?
1. EXPLORATION

Key Products

- Regional/Issue Needs and Opportunities Memo & Maps
- Program Benefits & Demand Potential
- Communication Strategy
- Regional/Issue Specific EcoInvestment
- Program Vision and FAQ
- Program Design Work Plan & Budget with Partner Resource Inventory
EXPLORATION – SITUATION ANALYSIS & FEASIBILITY

PEOPLE
Demand & Supply
The Players

POLICIES
Regulatory & Other Drivers

ENVIRONMENT
Environmental Needs & Opportunities

PROTOCOL
Review Existing Protocols
VISION DOCUMENT

• **Goal**: Provide a brief overview of the program to communicate fundamental information about the program and promote understanding amongst a broad audience of engaged stakeholders.
RESULTS CHAINS

• **Goal:** Describe the link between environmental needs, conservation opportunities, and demand drivers. All three elements are needed for a successful program.
2. DESIGN

How do we quantify ecosystem benefits and impacts from projects?

Who does what, when to generate & acquire credits?

How do we monitor, track and report benefits?

How to we incorporate performance-based credits into policies and programs?
2. DESIGN

Key Products

- Full Operational Protocol
- Quantification Tool & Guidance
- Basic Registry
- Monitoring Needs & Relationships
- **Demand Analysis** & List of Pilot Project Investors
- Program Operations Cost & Revenue Options
PROGRAM DESIGN

PEOPLE
Define Pilot Phase Roles

POLICIES
Identify & Coordinate with Existing Policy

ENVIRONMENT
Identify & Build Quantification Tools

PROTOCOL
Adapt & Modify Existing Protocols
THE BUSINESS CASE

- Increased **certainty** for gaining project approval/permits
  - Timeline
  - Cost
- Reduced cost
- Faster approval
- Improved reputation, social license to operate
- Larger, more meaningful conservation projects with real conservation benefits & reduced future regulatory risk
- Corporate social responsibility reporting
Prioritize Public Investments in Restoration

Define Project Benefits

Track & Report Program Outcomes

Payments for Ecosystem Services & Reverse Auctions

Performance-Based Permit Compliance

Water Quality Trading & Mitigation Banking

Robust In-Lieu Fee Programs

Continuum of Commitment to Performance

Credit Uses
DEMAND ANALYSIS

• **Goal**: Identify specific entities or organizations that may have a need for credits generated under the program in order to begin prioritizing outreach efforts.
Demand Analysis & Investor Adoption Approach

1. Identify & Investigate
   Identify Potential Investors & Value Hypotheses
   - Demand Sources Table

2. Contact
   Diagnose Needs, Explore Solutions
   - Interview Template

3. Collaborate
   Design Solutions
   - Demand Strategy Checklist
   - Letter of Intent

4. Deliver
   - Transactions with Signed Contracts
Functional Acres: Debits

100 acres x 90% function = 90 function-acres

20 acres x 0% function
80 acres x 50% function
= 40 function-acres

Total Debit: **50 function-acres**
Mitigation Requirement = Debit x 1.2
Mitigation Requirement = 50 function-acres x 1.2
= 60 function-acres
Functional Acres: Credits

Management Practices to Improve Habitat

20 acres x 0% function
80 acres x 50% function
= 40 function-acres

100 acres x 100% function =
100 function-acres

Total Credit: 60 function-acres
Credit – Debit = Net Benefit

60 function-acres – 50 function-acres = 10 function-acres of Net Benefit
KEY ROLES

**Goal**: Identify specific entities or organizations that can fill key operational roles once the program is established.

- **Primary Participants** are those who create environmental benefits on-the-ground and facilitate transactions.
- **Supporting Participants** do not participate directly in transactions, but provide technical and administrative support.
- **Oversight Participants** ensure that the Primary and Supporting participants are following the Operational Protocol and fulfilling regulatory requirements.
OPERATIONAL PROTOCOL

• **Goal**: Defines how different program participants use tools and forms to quantify, track, transfer and report benefits from conservation and restoration projects.
3. PILOT TEST

Will people really invest and produce?

Is this program helping us to achieve our goals?

What tools do we need to scale or adjust to increase efficiency and effectiveness?
PILOT TEST & BUILD OUT

**PEOPLE**
- Solidify Program Governance & Administration

**POLICIES**
- Coordinate with Regulatory Agencies

**ENVIRONMENT**
- Improve Quantification Tools
- Effectiveness Monitoring

**PROTOCOL**
- Test Protocol & Build Out
- Report Performance
CONTRACTS & FORMS

• **Goal**: Support and enable on-the-ground transactions
4. PROGRAM OPERATIONS

What new information can we use to adjust or increase program efficiency?

Are we on track to achieve our long-term goals?
ONGOING OPERATIONS

PEOPLE
- Solidify Program Governance & Administration

POLICIES
- Improve Coordination with Regulatory Agencies

ENVIRONMENT
- Improve Quantification Tools
- Effectiveness Monitoring

PROTOCOL
- Add Additional Tools & Standards
- Report Performance
ANNUAL REPORT

• **Goal**: Highlights the system-wide accomplishments of the program - identifies credits generated each year and summarizes activities undertaken by credit producers and program administrators.
**Treated Fuels**: Conducted controlled burning and vegetation thinning to create a ¼ mile wide area around communities. Used forest thinning and prescribed burns to achieve desired stand densities and age structures.

**Required Defensible Space**: Required all structures to have defensible space and ensured appropriate use of landscape design to buffer sensitive areas.

**Monitored Weeds**: Monitored Forest Service lands for extent and distribution of noxious weeds.

**Utilized Biomass**: Used fuels reduction products to improve air quality and generate energy.

**Investment**: $20 million spent on projects completed in 2009 and 2010.

**Task Force**: Tahoe Fire & Fuels Team (TFFT)


**Vegetation Richness**: At or somewhat better than target, little or no change, high confidence

**Small Diameter Tree Stands**: Considerably worse than target, unknown trend, low confidence

**Noxious Weeds**: No target for comparison, moderate improvement, low confidence

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**Assumptions & Influences**

- **Invasive Threats**: Invasive plants threaten biological diversity, increase wildfire risk, promote soil erosion, reduce land values and degrade recreational quality.

- **Decrease Fire Risk**: Fuels reductions treatments decrease the risk of loss from catastrophic fire. Weather and climate change strongly affect the risk that fire presents to communities and ecosystems.

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**Responses & Recommendations**

- **New Metrics**: New satellite image analysis and other remotely-sensed data are enabling the use of new metrics expected in 2013.

- **Target Setting**: Although agency management policies exist, EIP partners should establish targets for area of noxious weeds in order to evaluate the status of this resource.

- **Link to Ecosystem Health**: Although fuels treatments create a heterogeneous forest structure and increase vegetation diversity, they do not necessarily improve habitat for species.
After decades of fire suppression, Tahoe’s overstocked forests are highly vulnerable to insects, disease and catastrophic wildfire. They lack the diversity in species and age structure to support a healthy forest ecosystem. The EIP Forest Management Program improves the ecological health of Lake Tahoe’s forests and reduces the probability of wildfires that endanger communities.

Results Chain

EIP Action Priorities

Reducing Hazardous Fuels

Advancing Forest Ecosystem Health

System Drivers

Creates Defense Zone

Weather & Climate Change

Diversifies Forest Structure

Improves Fire Behavior

Restores Vegetation Dynamics

Status & Trend

Fuels

Vegetation Richness

Considerably worse than target

High confidence

At or better than target

No change

High confidence
QUESTIONS & LESSONS LEARNED