

Colorado Conservation Exchange

Increasing the returns from our investments in Colorado watersheds through ecosystem service 'markets'

Heather Knight, David Jessup, Hill Grimmet, Josh Goldstein, Heidi Huber-Stearns and Robin Reid

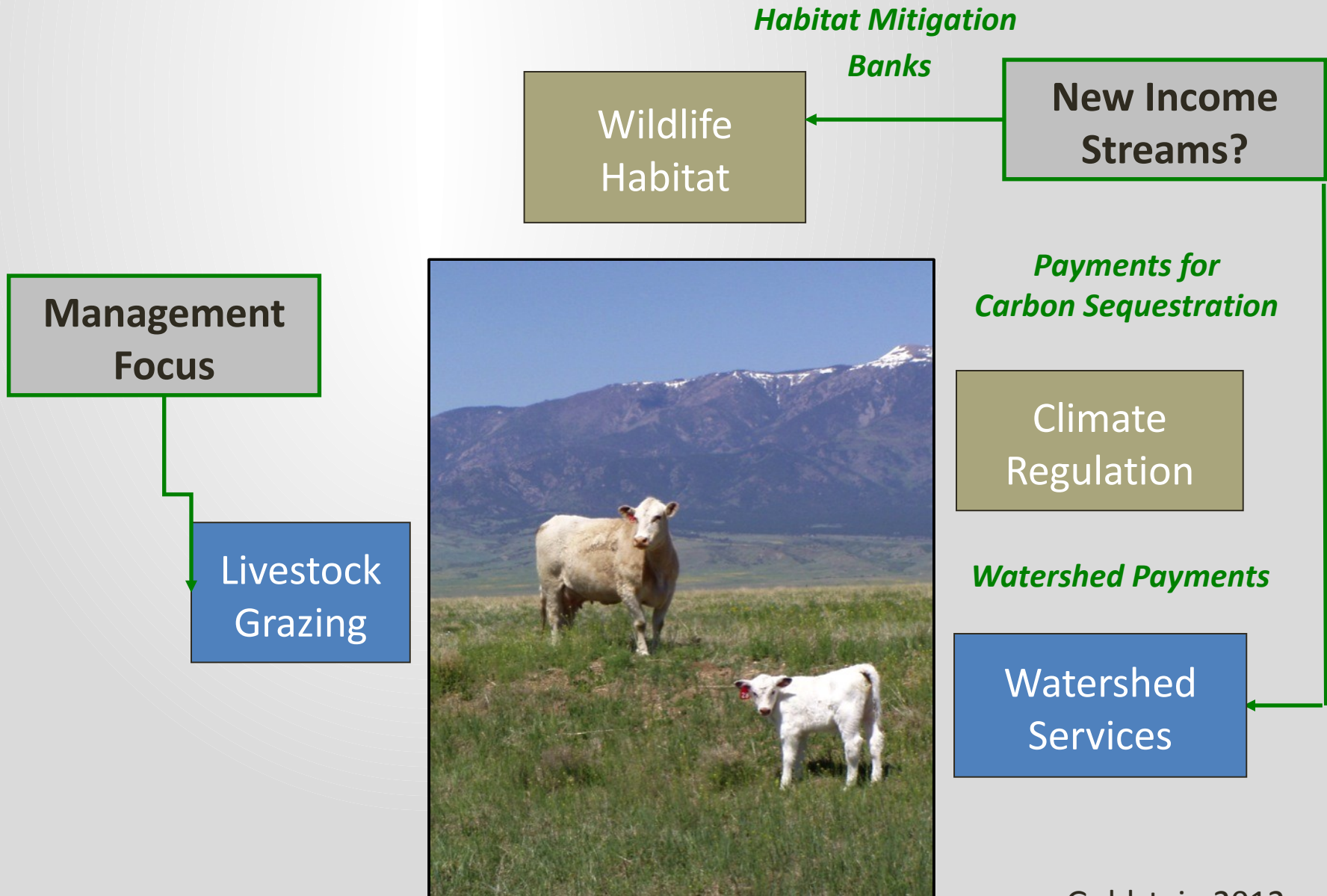


Where we are going

- **Ecosystems as capital assets**
- **Tools to increase investment**
- **Why, what, how of the Colorado Conservation Exchange**
- **Lessons learned and what's next**



Ecosystems as Capital Assets



Six tools for increasing investment

- **Direct public payments (e.g., EQUIP, Forest to Faucet)**
- **Direct private payments (e.g., non-profits to landowners)**
- **Tax incentives (e.g., Colorado incentives for conservation easements)**
- **Cap-and-trade markets (e.g., California greenhouse gas market)**
- **Voluntary markets (e.g., carbon markets)**
- **Certification (e.g., Predator friendly beef)**

Why use investment tools?

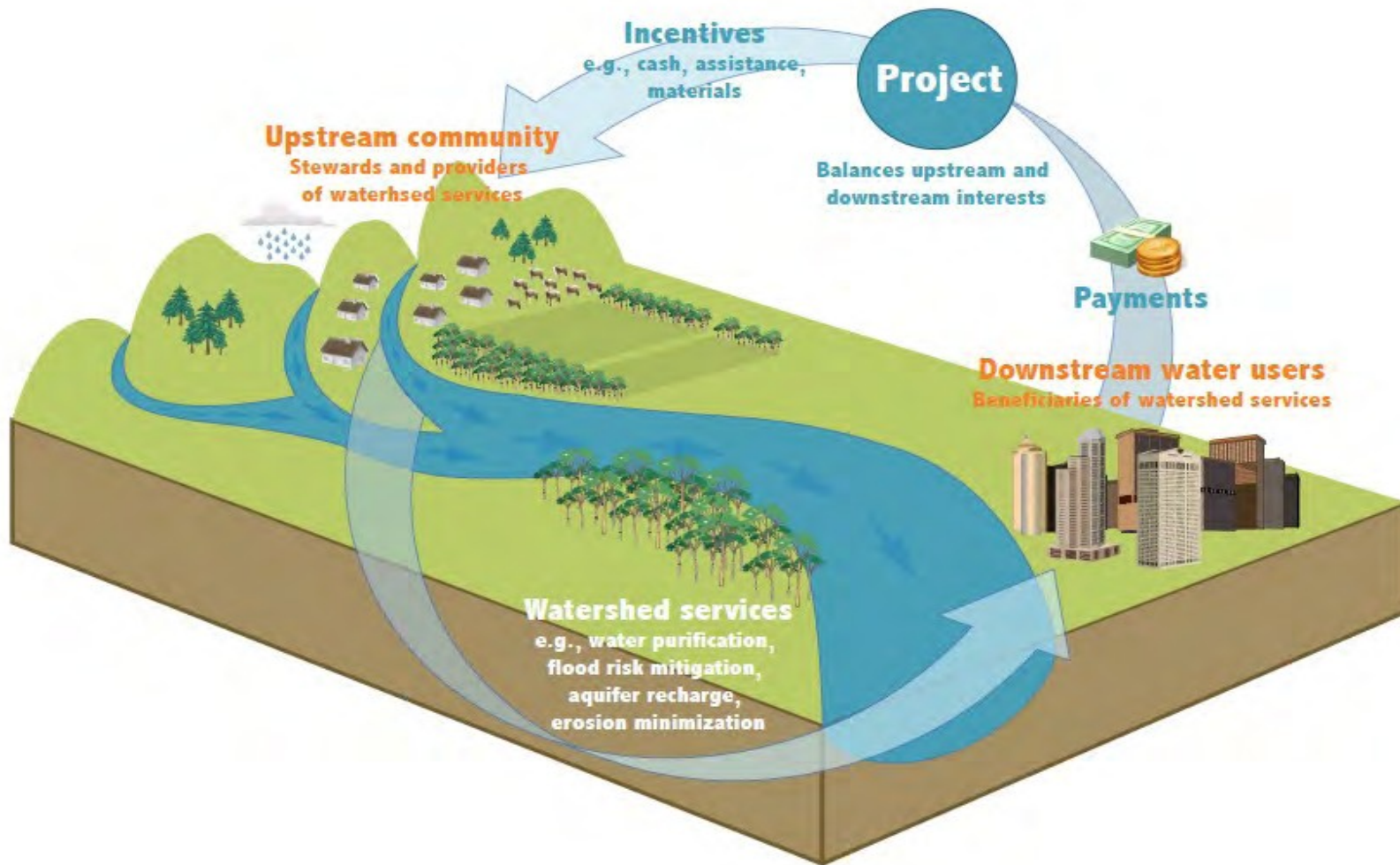
(Much more than just economics)

- **Helps us value our environment**
- **Improve stewardship and profitability of ranches, farms, forest, and public lands**
- **Connects rural people who provide ecosystem services with urban people who use them**
- **Helps restore forests and grasslands facing many pressures (fires, beetles, development)**
- **Accelerates conservation, get ahead of new regulations**
- **Builds community!**

The Colorado Conservation Exchange: what we are doing

- **Started broad and then focused on a proof-of-concept: one ecosystem service, two watersheds, one tool, two field pilots**
- **Asked stakeholders: Who is interested?**
- **Asked economists: Will it pencil out? (what is the business case for an investment fund?)**
- **Asked ourselves: If it pencils, how do we build it? (investment fund development)**

First tool: a watershed investment fund



Source: Forest Trends

Exchange Vision & Mission

Our Vision: A Colorado where rural and urban communities join to enhance the natural resources, wildlands, and agricultural areas on which our quality of life depends.

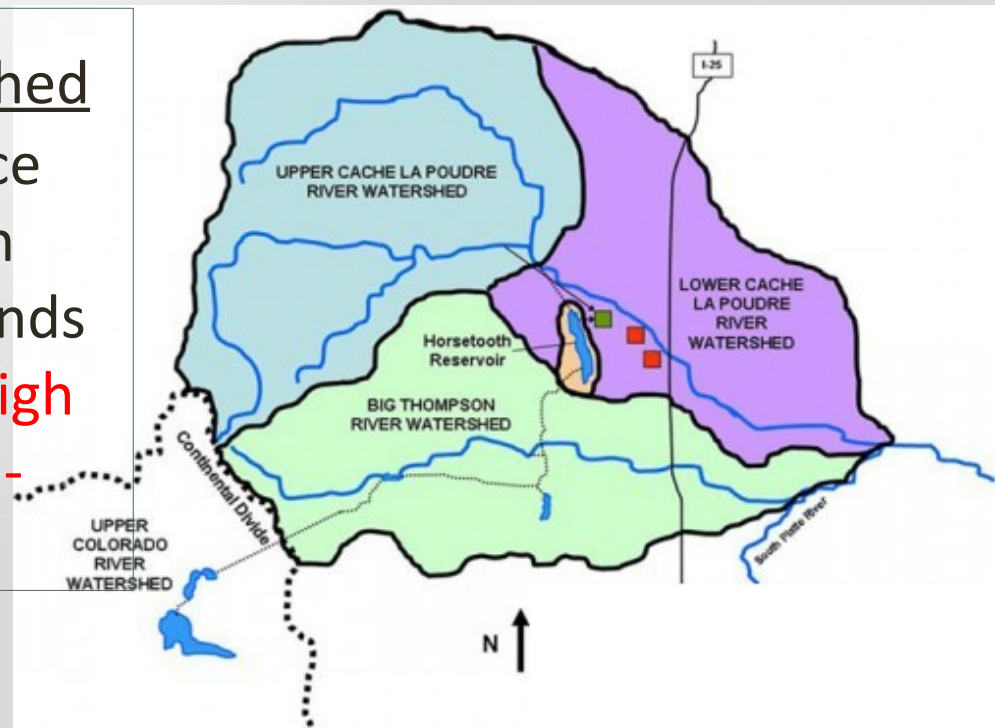
Our Mission: To create a successful watershed investment fund where community members support land stewards who conserve and enhance nature's ability to provide clean and abundant water, healthy food, productive soils, carbon storage, wildlife habitat, and inspiring open spaces



Exchange Focus

- Initial focus: water quality in the Poudre and Big Thompson watersheds of northern Colorado
 - Forests upstream and farms / ranches downstream
 - Drinking water and wastewater treatment

Goal: to establish a watershed investment fund to finance water quality projects on forested and agricultural lands that have the promise of **high environmental return-on-investment**



An example Exchange transaction

- Connects the beneficiaries of ecosystem services with landowners and natural resource managers who produce them

Example

A water utility needs improved water quality and a rancher can provide that



Water Utility (or
brewery, citizens)



Rancher (or
farmer, forester)

Looks simple, but it's a lot more complex

Beneficiaries contribute monetary, in-kind, and other donations to the **Exchange** to help them manage their needs related to nature's benefits

Exchange matches the **Beneficiaries'** needs for nature's benefits with **Stewards** who can provide them.

Beneficiaries ("Buyers")

Utilities, Businesses,
Breweries, Local Food
Consumers,
Households,
Developers,
Recreationists,
Nonprofits, Universities,
Public Agencies, Private
Foundations, Visitors

Fund Administration:
Professional financiers, foundations
and endowment managers provide
assistance to the Exchange

Intermediaries

Registry:
Independent third party registry
records production and transfer of
certified nature's benefits

Colorado Conservation Exchange

Technical Assistance:
Technical experts work with Stewards to
determine best management and
restoration practices to produce nature's
benefits

Intermediaries

Monitoring / Verification:
Independent third party monitors
verify the production of nature's
benefits

Stewards ("Sellers")

Farm, ranch and logging
families; natural
resource managers,
public land managers;
small acreage
landowners; NGOs and
volunteer groups

Exchange ensures production and delivery
of certified nature's benefits to
Beneficiaries

Stewards use resources from the **Exchange** to
implement practices that enhance nature's
benefits desired by **Beneficiaries**

Does it pencil out?

- Are returns on investment in fire prevention projects and agriculture best practices (green infrastructure) greater than those in new water treatment facilities (gray infrastructure)?
- Investment return = clean, affordable water for municipal and business use
- Included investments in the upper watershed (forest health) with those in lower watersheds (wastewater)

Over 20 years...

- Investing in forest thinning, prescribed fire, forest restoration, fuel breaks and road decommissioning would reduce the risk of fire and associated costs for drinking water. **Bottom line: Up to \$320 million in cost savings.**
- Investing in nutrient reduction from grazing lands and croplands would help meet upcoming regulation 85, and remove the need to build more water treatment facilities. **Bottom line: from \$9.8-\$15.4 million in cost savings.**

Will management provide significant environmental returns on investment?

Pilot Field Testing

Sylvan Dale Guest Ranch (Loveland): Reducing nutrient run-off

Roberts Ranch (Livermore): Restoring eroded land

Collaborators:

- Wildland Restoration Volunteers
- The Nature Conservancy
- Colorado State University (Institute for Livestock and the Environment)
- Natural Resources Conservation Service
- US Fish and Wildlife Service, Colorado Parks and Wildlife
- Colorado Water Conservation Board
- New Belgium Brewing
- Northern Water
- City of Fort Collins & Loveland
- Big Thompson Watershed Forum

Sylvan Dale Pilot Project



Photo by David Jessup

Sylvan Dale Pilot Project



Zack Shelley and Mark Wyscarver

Photo by David Jessup

Roberts Ranch Pilot Project

The challenge



Photo by Jonathan Stauffer, Eco-Hydro Consulting

The restoration goal.....

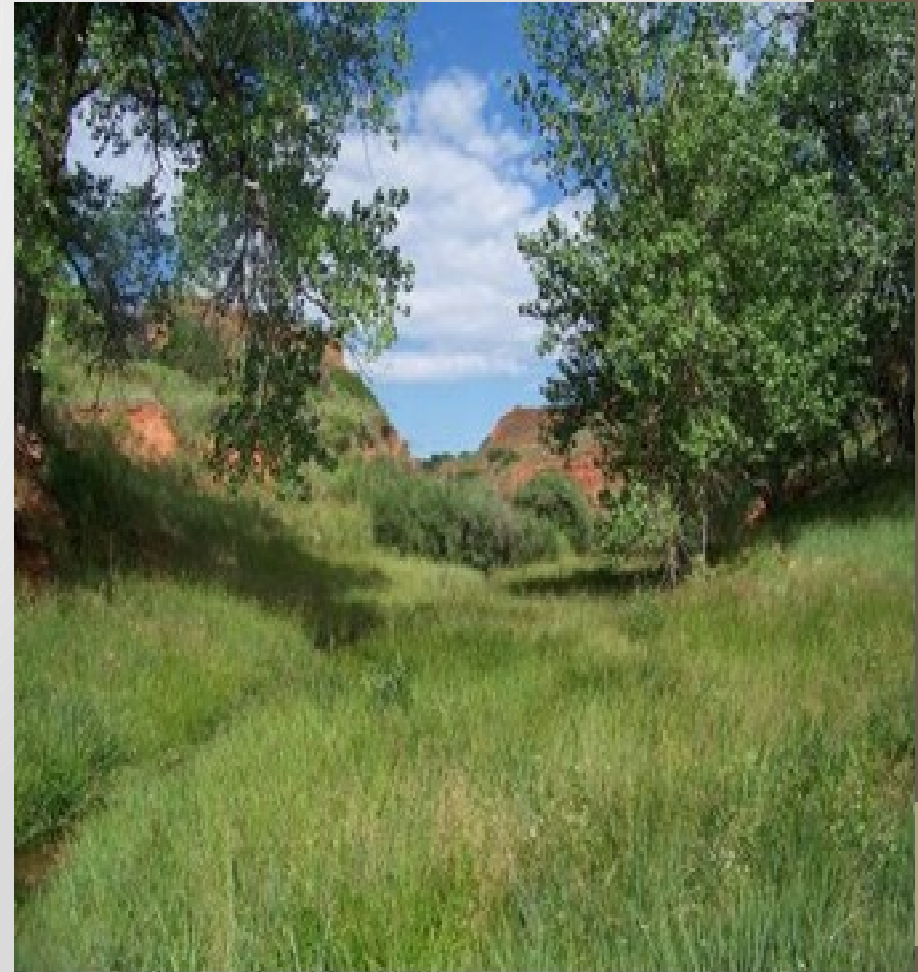
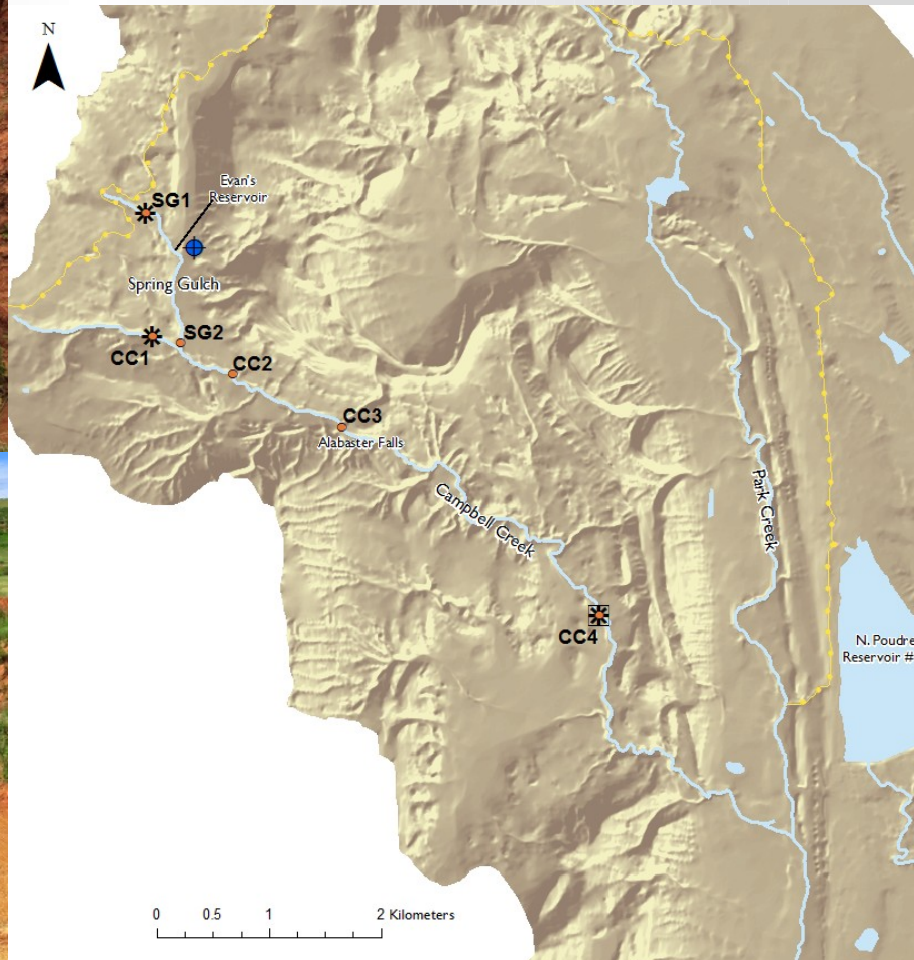


Photo by Wildlands Restoration Volunteers

Roberts Ranch Pilot Project



Lessons learned

- **Be focused but flexible, we will likely use 4-5 investment tools over the near term**
- **Economic analysis on return on investment is key to engaging business, utilities**
- **Big events can divert focus from long-term investment, but also point the long-term need**
- **Diverse steering committee very important**
- **Strong connections to stakeholders helped make faster progress**
- **But...**

Lessons learned

- **Start small, simple and move to larger, more complex (one tool, one service)**
- **The idea is great but implementation is hard**
- **Volunteer group is not enough, need full-time help and other experts**
- **Not sure the scale is large enough to support an exchange (but we will see!)**

What's next?

Development Stage:

Explore

Design

Test & Build Out

Goals:

Identify demand for credits & primary participants

Develop tools that are: Market & science-based, measurable & beneficial, transparent and fair to all participants

Pilot test of Exchange

Analysis & Outreach

Expansion of CCE

Science Team
Stakeholder Outreach
Market Development

Pilot Testing and Administrative Capacity Building

2011-2012

2013

2014



Thank You !

**From the
Colorado Conservation
Exchange**

