WATER FUNDS

Feasibility Phase

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Welcome!

Workshop Objectives

- Apply what you learned from the online training through a series of hands-on exercises and presentations.
- Establish a peer/mentor network to foster ongoing learning and mentoring throughout the Water Funds Project Cycle.
- Demonstrate a working knowledge of the fundamental concepts of Governance, Science, Finance, and Implementation through the delivery of an action plan to complete a Feasibility Study at the end of the workshop.
- Engage in applied learning by sharing your experiences and expertise.

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Agenda

MONDAY, MAY 1, 2017	
Time	**Topic**
5:30 – 6:45 PM	Registration/snacks at 5:30 PM, Buffet Dinner at 6:00 PM
6:45 – 8:00 PM	Workshop Welcome Icebreaker: Group presentations Discussion: What was the biggest challenge you are trying to address right now, and/or a success?
TUESDAY, MAY 2	
9:00 – 9:15 AM	Introduction - Roadmap for the workshop
9:15 – 10:30	Defining the Problem, Goals and Solution
	BREAK
10:45 – 12:15	Defining the Geography: Physical and Social Basins
12:15 – 1:00 PM	LUNCH
1:00 - 2:30 PM	Pitching Your Story (in an elevator)
2:30 – 2:45 PM	BREAK
3:00 – 4:30 PM	Identifying Stakeholders and Champions and Creating Partnerships
4:30 – 5:00 PM	Day 1 Closeout
6:30 PM	Dinner on your own
WEDNESDAY, MAY 3	
9:00 – 9:15 AM	Welcome
9:15 – 10:45 AM	What is it going to Cost?
10:45 – 11:00	BREAK
11:00 – 12:00	Measures and Accountability
12:00 – 12:45	LUNCH
12:45-1:45 PM	Risk identification: Do You Have the Capacity?
1:45-4:00 PM	Pull it all Together in an Action Plan
4:00-5:00 PM	Closeout Session:
6:30 PM	No Host Group Dinner at a Santa Fe Restaurant

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Participant Icebreaker Presentations

View individual presentations.

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Day 1 - Workshop

Day 1 - Agenda

Time	Topics
9:00 – 9:15 AM	Introduction - Roadmap for the workshop
9:15 – 10:30 AM	Defining the Problem, Goals and Solution
10:30 – 10:45	BREAK
10:45 – 12:15	Defining the Geography: Physical and Social Basins
12:15 – 1:00 PM	LUNCH
1:00 - 2:30 PM	Pitching Your Story (in an elevator)
2:30 – 2:45 PM	BREAK
3:00 – 4:30 PM	Identifying Stakeholders and Champions and Creating Partnerships
4:30 – 5:00 PM	Day 1 Closeout
6:30 PM	Dinner on your own

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Defining the Problem, Goals and Solution

Objectives:

- Participants will use what they learned in the online training about Governance, Science, Finance and Implementation to:
  - Define the problem their Water Fund will address
  - Identify a list of prioritized potential solutions to address stated problem
- Create a list of goals for people, nature, and water security that are meaningful, clear, and measurable

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Key Concepts: Defining the Problem, Goals and Solution

- Understanding the key water security issues that a water fund might be able to help address is essential for defining the overall problem.
- Understanding key ecosystem services that might help to address those issues is essential for defining the range of solutions a water fund may be able to offer.
- Consideration of how this broad range of solutions is valued by different stakeholders is important, as some will be more financially viable than others.
- Goals should be based on science, collaboratively developed, and meet the needs of people and nature.
- Engagement of stakeholders and champions in the process of defining the problem, goals and solutions is critical.

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Savannah River Clean Water Fund Mentor Presentation

Eric Krueger

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Savannah River Clean Water Fund – What We Are:

- Incorporated as a 501(c)(3) Non-profit (SRCWF, Inc)
- 12-member Board of Directors (structured for balance)
- 5 utilities committed $1M/year for 3 years in pilot implementation phase

Savannah River Clean Water Fund

SAVANNAH RIVER Clean Water Fund

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Our Utility Partners:

BEAUFORT – JASPER WATER & SEWER AUTHORITY

COLUMBIA COUNTY GEORGIA

A Community of Pride • A County of Vision • Endless Opportunities

PROFESSIONALISM • RESPECT • INTEGRITY • DEDICATION • EXCELLENCE

CITY OF Savannah

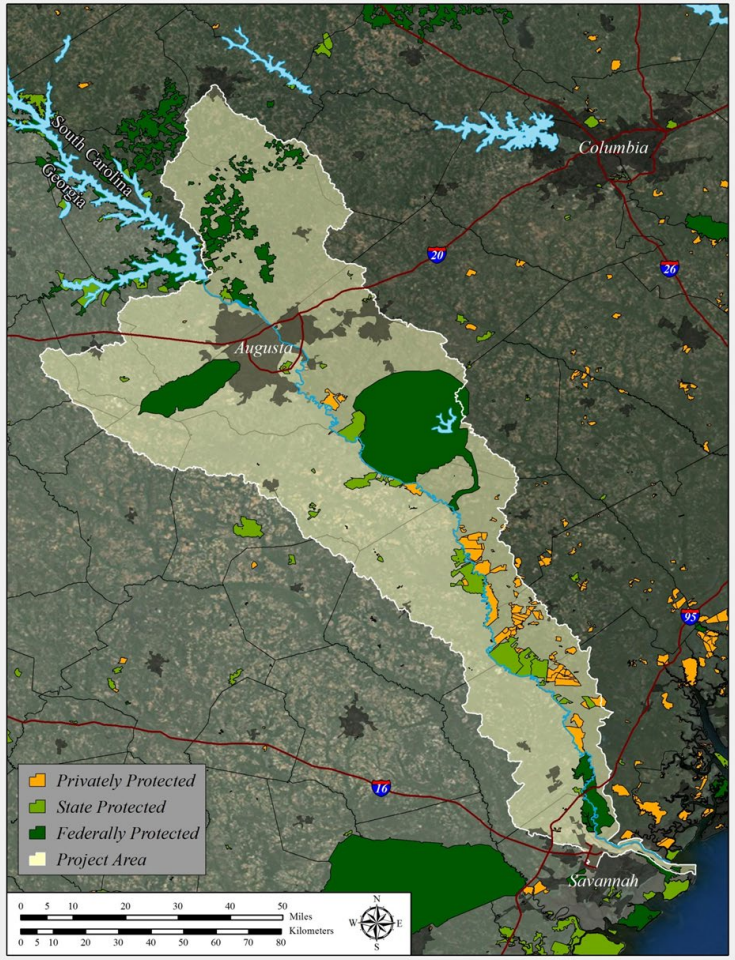
Augusta GEORGIA

North Augusta

South Carolina's Riverfront

Our Landscape

Geography



- 2.8M Acres / 1.13M Hectares
- 78% Forested
- 18% Protected Area

Savannah River Clean Water Fund

SAVANNAH RIVER Clean Water Fund

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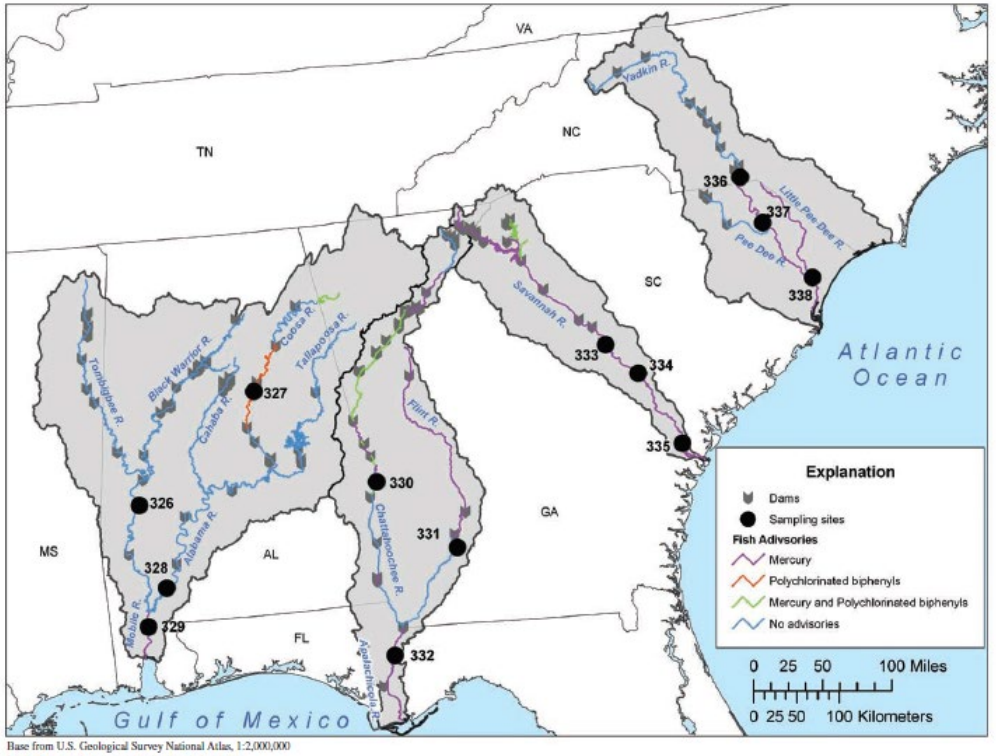
Problems

Maintain this?

Or wait for more of this?



Base from U.S. Geological Survey National Atlas, 1:2,000,000
North America Albers Equal Area Conic projection

Figure 2. Dams and fish consumption advisories to protect human health in the Mobile, Apalachicola-Chattahoochee-Flint, Savannah, and Pee Dee River Basins. Sites sampled in 2004 also are shown. See table 5 for station descriptions.

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Goals

- Retain 60% natural cover in the watershed
- Protect 8000 acres per year of priority lands for water quality
- Improve management on existing forest and agricultural lands
- Develop new funding support to realize the above

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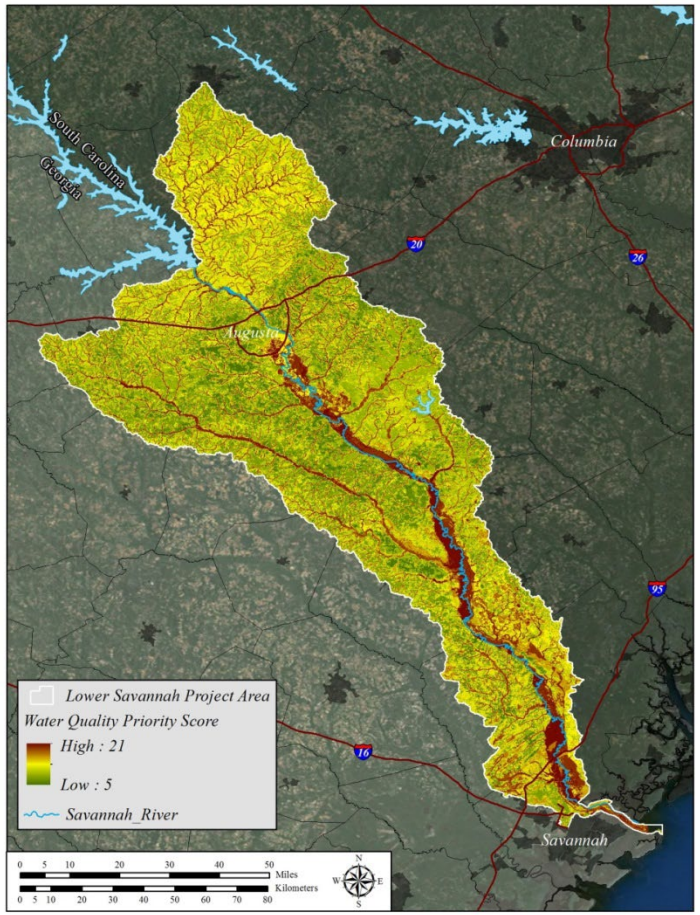
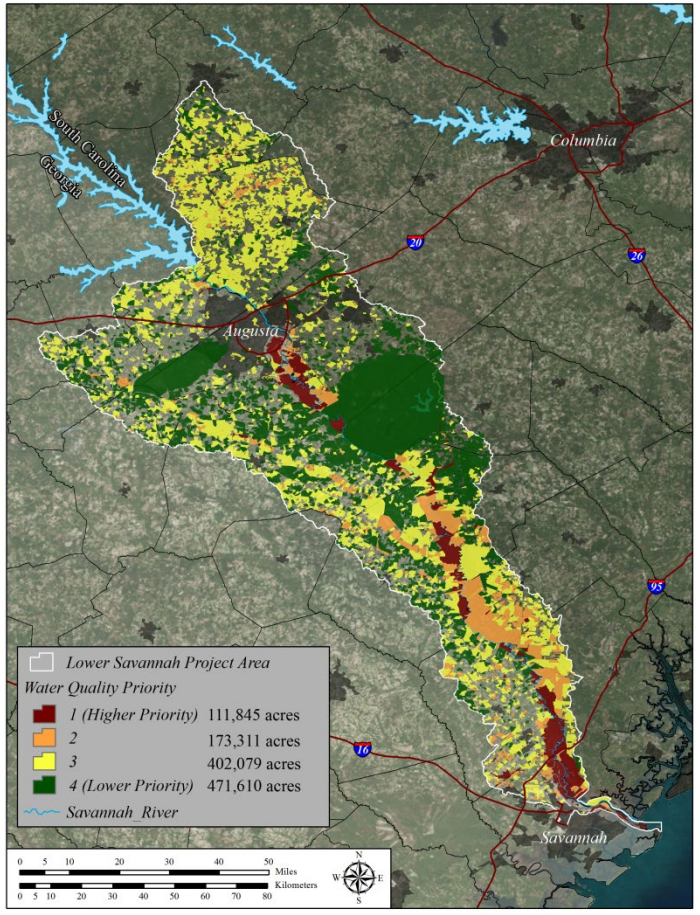
Solution #1: Prioritized Land Protection





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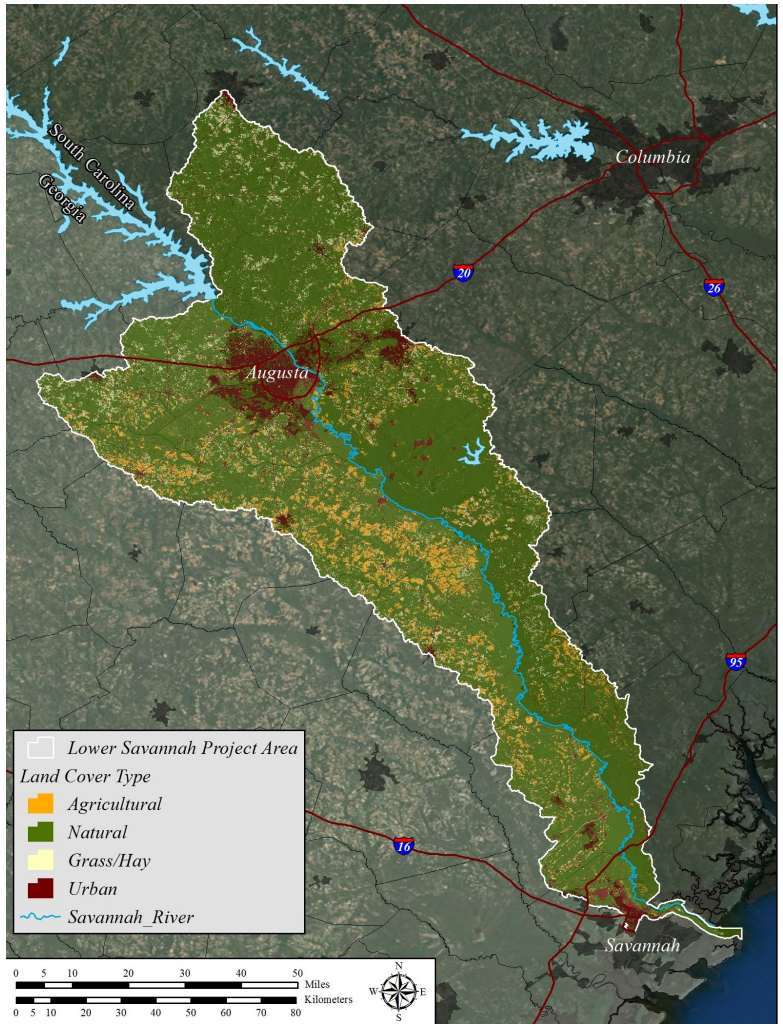
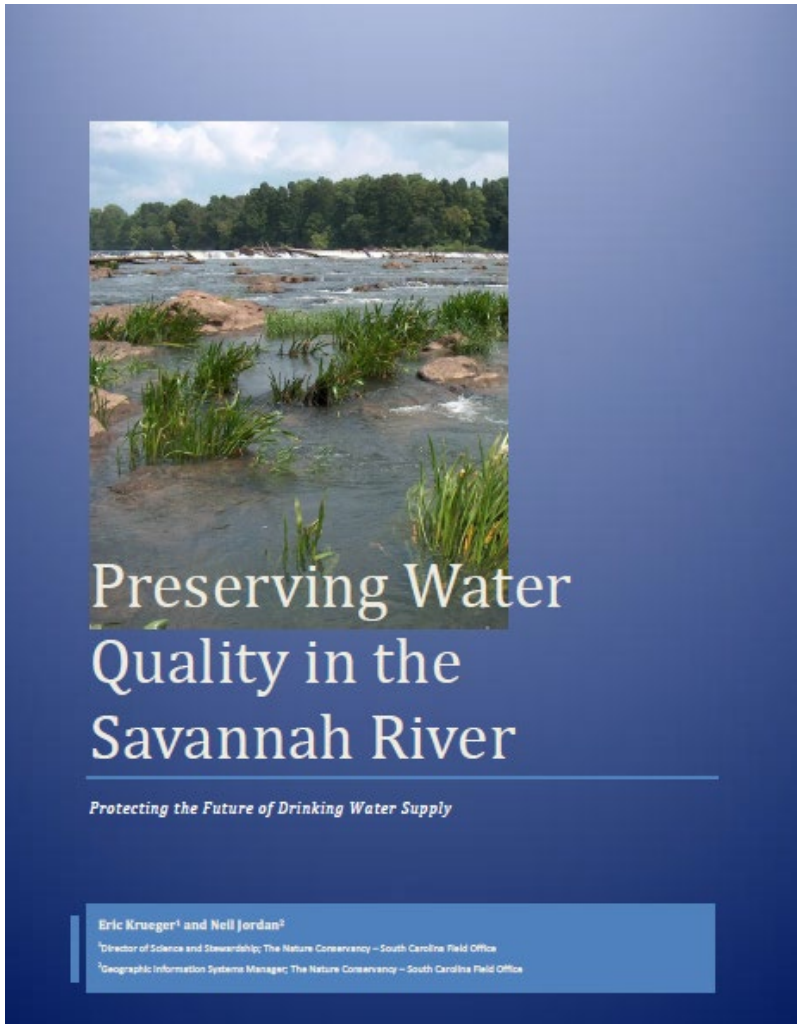
Solution #2: Agricultural BMP's





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Exercise - Defining the Problem, Goals and Solution

At your table, define the problem, goals and solutions for your water fund.

Using the slide deck template, complete **slides 2-4** by:

1. Defining your problem statement.
2. Creating a list of goals that are meaningful, clear, and measurable. This needs to include goals for people, nature, and water security.
3. Creating a prioritized list of potential solutions that are most likely to address your stated problem.

Group Discussion

1. What are your observations about the ways in which science, finance, governance and implementation are intertwined in the problem, goals and solutions you created for your location?

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Defining the Geography: Physical and Social Basins

Objectives:

- By exploring different physical and social boundaries participants identify the different pathways for creating a fund and list the pros/cons of those options (e.g. scale of the problem, relationship to water users, etc.).
- Create a series of maps illustrating the potential boundaries of a water fund, with a determination of ‘the best’ example.

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Key Concepts: Defining the Geography

- Social basins and watershed basins don't necessarily have perfect overlap; both need to be considered in creating the water fund boundaries.
- Defining the water fund geography will need input from partners and stakeholders.
- The boundary setting process will take time and may need to go through several iterations.

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Mentor Presentation

Heather Schinkel

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Colorado Conservation Exchange

Create a watershed investment fund in which land stewards are rewarded for the ecosystem service they provide.

Geographic Focus

Cache la Poudre Watershed
Big Thompson watershed

Premise

Downstream water dependent businesses will fund wildfire mitigation projects in the upper watersheds.

Proof of Concept Phase 2015 -2018

- Test through demonstration sites
- Develop infrastructure/programmatic decisions
- Develop watershed optimization models and benefit calculators (with the Colorado Forest Restoration Institute)
- Engage landowners and investors




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History

2008 Larimer Foothills Committee ecosystem services and ranching conversation

2009 Exchange idea born and housed at CCC

2010 Exchange Steering Committee created

CCC brings on Exchange Coordinator

Exchange major stakeholder meeting

High Park Fire

2011 Exchange helps form High Park Fire Coalition

2012 Exchange Coordinator position ends

2013 SC coordinates contracts with WRI, EI and CSE for analysis & program design guidance.

Exchange Coordinator brought on to coordinate reports

Exchange shares report results with stakeholders

2014 Exchange Decision & Design Meeting with stakeholders

Exchange interim steps with utilities & local NGOs

March 2014: First Working Group meeting

June 2015: Grant to complete design and test

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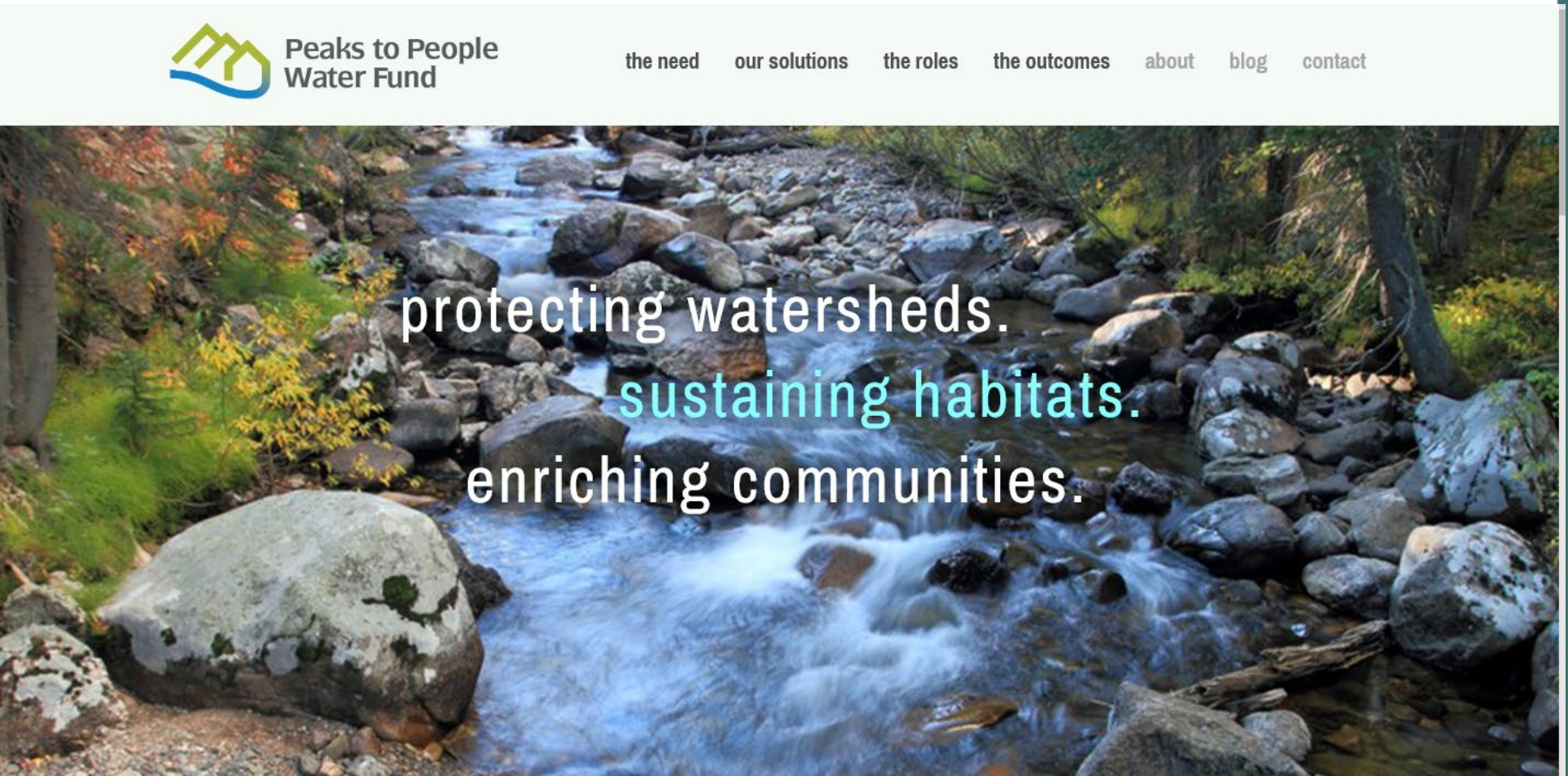
Learn More

http://www.collaborativeconservation.org/colorado-conservation-exchange

June 2018: www.peakstopeople.org



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Origin and Original Scope

- Laramie Foothills Committee
- Focus on Ranchers

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Shift in Focus

- Catastrophic fire in the Cache la Poudre. Catastrophic flood in the Big Thompson.

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Feasibility Study – "Green Grey Analysis"

Opportunities Identified

- upper watershed
  - ✓fire risk reduction & watershed restoration practices reduce fire-related costs - $320 million over 20-years
- lower watershed
  - ✓nutrient trading program reduce cost of waste water treatment - $9.8 to $15.4 million


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Analysis • Solutions • Advocacy

WORLD RESOURCES INSTITUTE

A Preliminary Green-Gray Analysis for the Cache la Poudre and Big Thompson Watersheds of Colorado's Front Range

Phase I Final Report

John Talberth, Ph.D.[1]

James Mulligan[2]

Bryan Bird[3]

Todd Gartner[4]

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Social Basin

- Began with a wide net.
  - Extensive Stakeholder engagement
  - Stakeholder Committee
  - Working Group
- Landowner and business engagement strategic and in later stages

Working Group Members:

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Sylvan Dale Guest Ranch

New Belgium Brewing

Center for Collaborative Conservation

brendle GROUP

City of Fort Collins
Water Resources & Treatment Services

Odell Brewing Co.

Larimer County
Committed to Excellence

Big Thompson Watershed Forum

Coalition for the Poudre River Watershed

City of Greeley Colorado

Community Foundation of Northern Colorado and Community Foundation Trust

Anheuser-Busch

Forest Service U.S. Department of Agriculture

Natural Heritage Program Colorado

Northern Water

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Challenges and Lessons Learned

- Broad focus and follow the money
- Challenges with 2 watersheds
  - Source of some is outside out watersheds
  - Redundant water sources
  - Fort Collins may not connect to Big Thompson
  - Uneven picks in the 2 watersheds
  - Different stakeholders and issues
- Competition
- Transitioning the Working Group to a Board
- Differing opinions on our scope

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Next Steps

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Exercise – Define your Geography

At your table, discuss how you define your water fund geography, considering both physical and social basins.

Complete **slides 5 to 8** by:

1. Using a map, google earth, or an infographic, identify at least 2 different ways of drawing the boundaries of your water fund.
2. Present the pros and cons of each to the full group and identify which of your examples works best and why.

Group Discussion

1. Which of the maps you created has the strongest linkage between upstream water sources and downstream water users?
2. How might different stakeholders and champions respond to the two maps? Will one have broader appeal than the other(s)? Why?

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Pitching your Story (in an Elevator)

Objectives:

- Create and deliver an elevator speech using a PowerPoint presentation and print resources as support materials.
- Explain how your elevator speech effectively addresses different audiences.

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Key Concepts: Pitching your Story

What does a good elevator speech summarize?

1. Problem being addressed
2. Solutions to implement
3. How stakeholder's goals can be achieved

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Mentor Presentation

Laura McCarthy

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Rio Grande Water Fund

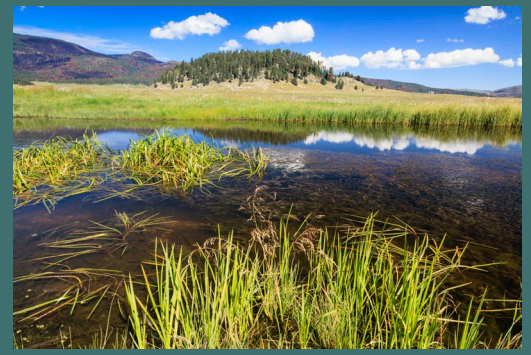
Location = Here

7 million acre watershed from ABQ to Colorado

Encompassing 1.7 million acres of at-risk forests

Goal = Restore 600,000 acres of at-risk forests over 20 years.

Rio Grande Water Fund



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History

2006 – Learned about Quito Water Fund

2007 – Feasibility for Santa Fe Water Fund

2008 – Design for Santa Fe Water Fund

2009 – Launch of Santa Fe Water Fund

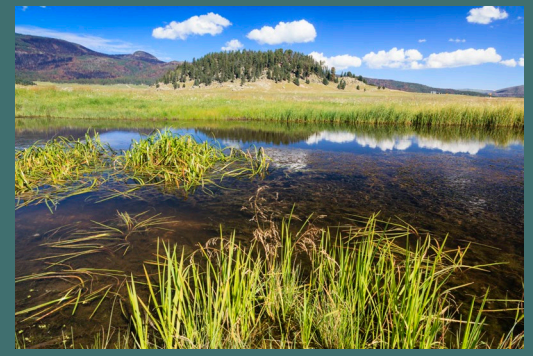
2011 – Idea of Rio Grande Water Fund emerged

2012 – Feasibility for Rio Grande Water Fund

2013 – Design for Rio Grande Water Fund

2014 – Launch of Rio Grande Water Fund

Rio Grande Water Fund



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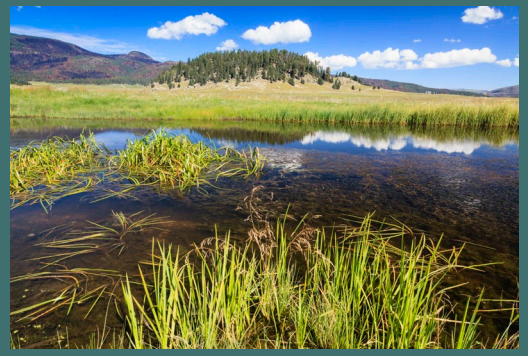
2014 Goal Statement

The Rio Grande Water Fund is established to achieve the **vision** of healthy forests and watersheds that provide a reliable supply of high-quality Rio Grande water and other benefits for New Mexico. The **goal** of the water fund is to protect storage, delivery and quality of Rio Grande water through landscape-scale forest restoration treatments in tributary forested watersheds, including the headwaters of the San Juan Chama Project. The **objectives** of the water fund are to:

- Restore watershed functions by improving the health of streams and riparian areas.
- Mitigate the downstream effects of flooding and debris flows after wildfires.
- Reduce forest fuels in areas identified as high risk for wildfire and debris flow.
- Support forest products industries' use of wood by-products from forest fuel reduction.
- Maintain the reduced wildfire hazard in treated areas.
- Secure sustainable financing from water users, government, investors and donors, and facilitate payments to upstream land managers.

Rio Grande Water Fund



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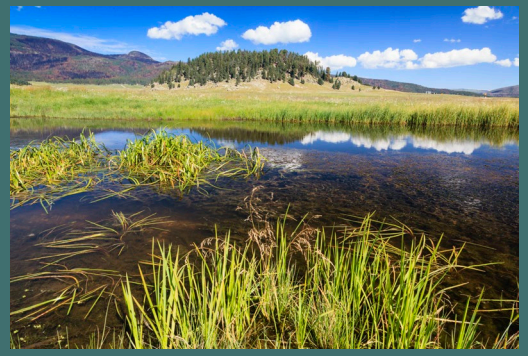
Will it Fit in an Elevator?

Rio Grande Water Fund



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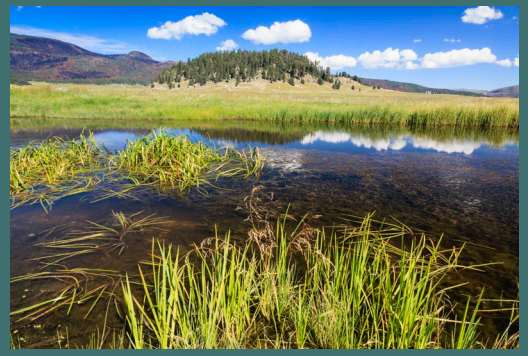
Will it Fit in an Elevator?

Problem: Our water sources are vulnerable to wildfire and the pace and scale of protection efforts are insufficient.

Solution: Create a public-private partnership to engage downstream water users in protecting critical upstream water sources.

New Goal Statement: Restore 600,000 acres of at-risk forests over 20 years.

Rio Grande Water Fund



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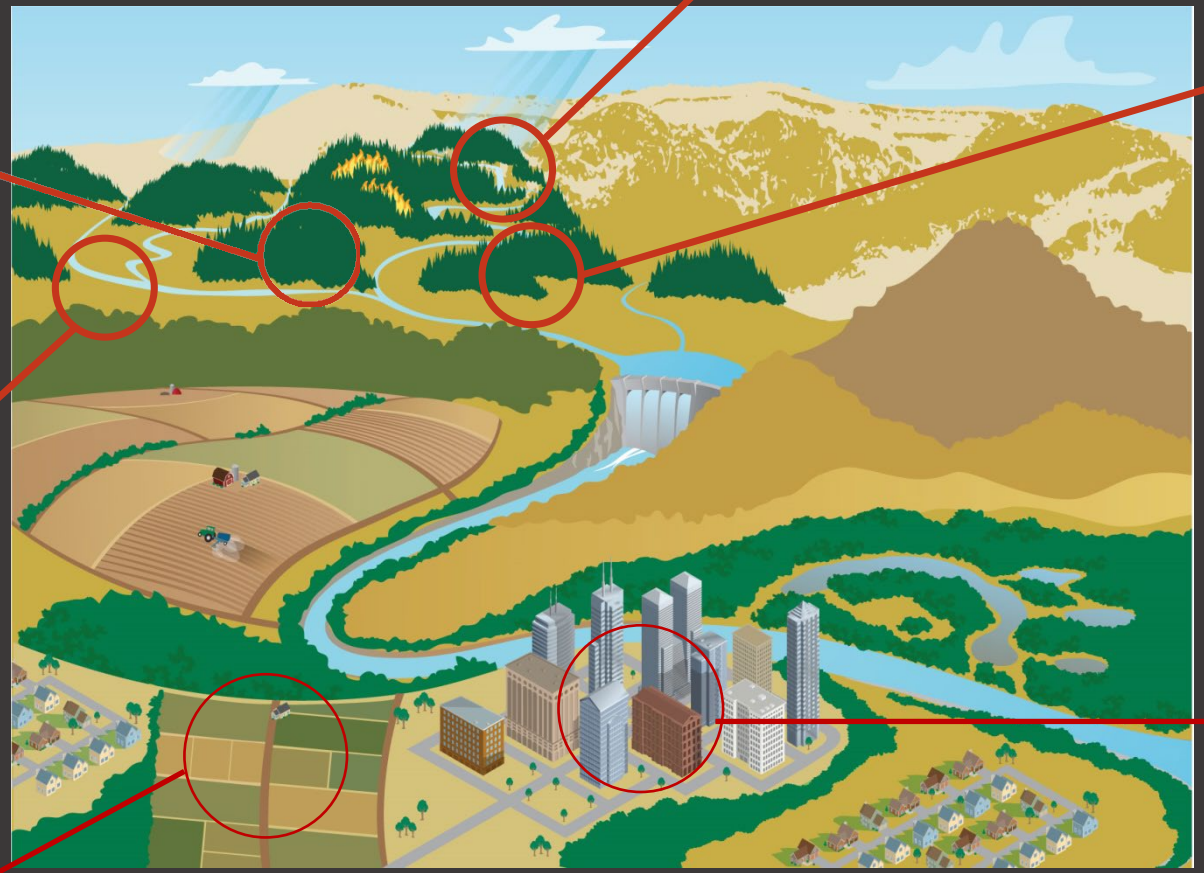
Rio Grande Water Fund

Restoring essential forested lands upstream will ensure a continuous supply of clean water downstream



Snowpack

Wildfire

Tree Thinning

Fish

Water

Economy

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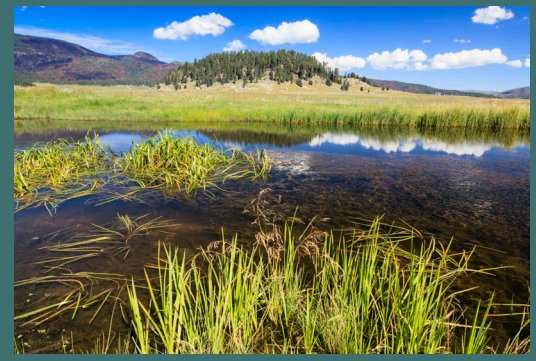
Shorter = Easier to Tailor for Different Audiences

Rio Grande Water Fund



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Exercise – Your Elevator Pitch

In your group, practice writing an elevator speech.

Use **slide 9** to:

- Write an initial elevator speech that is 20-30 seconds long.
- Identify potential visual aids and print resources that could support your elevator speech.

Select one team member to present your elevator speech to the group and discuss how you will need to vary these for different audiences.

Group Discussion

1. How do you adapt the elevator speech to different audiences? What kinds of visual aids and print resources could you create to support your words?

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Identifying Stakeholders and Champions and Creating Partnerships

Objectives:

- Develop a basic ‘stakeholder map’ that includes identifying a list of high-influence / high-interest stakeholders.
- Create a list of potential champions.
- Identify stakeholders and champions to (a) enhance understanding of who might be involved/impacted by a water fund and (b) who likely holds influence in the proposed water fund vs their interest in it.
- Identify prospective partnerships and draft a partnership plan based on stakeholder analysis.

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Key Concepts: Stakeholders and Champions

- Stakeholders are those who are affected – in diverse ways – by the problem to be addressed.
- Depending on how they are affected, stakeholders will value the range of potential solutions a water fund can offer differently, and will thus hold different levels of interest and influence in terms of their participation.
- In conducting a stakeholder analysis, review the actors within the geographic and social basins.
- The involvement of identified stakeholders in further brainstorming and prioritizing of potential solutions is important.
- Champions are a special subset of stakeholders who will be motivated to take deliberate action to advance solutions.

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Paul Summerfelt

- *Wildland Fire Management Officer*
- *Project Manager - Flagstaff Watershed Protection Project*

Flagstaff (AZ) Fire Dept

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FWPP:

- A $10M citizen approved bond initiative,
- Structured as a capitol bond,
- Identified the "forest" as a critical (*most important*) component of the city's water infrastructure,
- Recognized that catastrophic wildfire and post-fire flooding events is inevitable . . . *unless* action taken to reduce that risk,
- We, the citizens, are the ones most impacted by these events,
- Promoted as an investment, not a cost,
- Mix of USFS, State, and City lands,
- Citizen PAC – *Yes on 405 ($8K budget),*
- Approved by 74% of voters in 2012,
- Only bond funded such effort in country.

Flagstaff Watershed Protection Project

"In Flagstaff, voters were more interested in fixing the problem than assigning blame"

- AZ Republic

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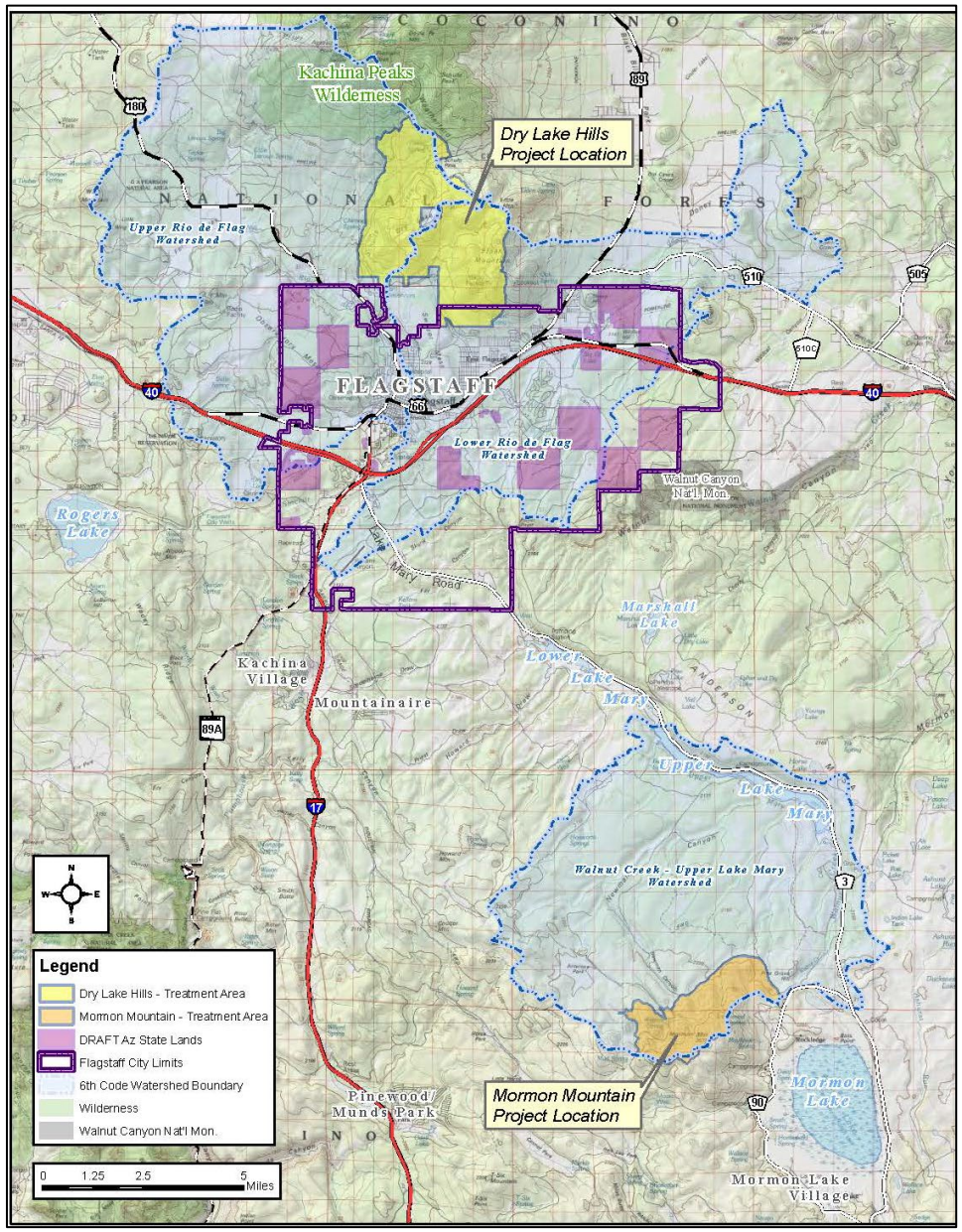
Location of FWPP



Flagstaff Watershed Protection Project

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FWPP:

- Built on 15 years of prior effort,
- Funding only for initial treatments (maintenance needs – to protect investment – recognized and discussions on-going),
- Mix of jurisdictions allowed early/continuing work to occur (State and City lands) = visibility to voters,
- USFS:
  - NEPA planning efforts required,
  - City was part of ID Team,
  - USFS Project Manager assigned full-time,
  - Very focused objective (matched ballot measure),
  - No preferred alternative (community input),
  - FEIS and FROD completed in record time (2.5 years)
- 20% of treatment completed, 25% of funds expended,
- $3.4M in leveraged funds (to-date).

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Stakeholders

- **SH's**
  - relatively simple to identify – t*hose who <u>should</u> be engaged and have <u>something</u> to offer,*
  - Can we "reach" and engage them?
  - Are we willing to adjust our goals/message/operational tempo (battle-rhythm) to accommodate their interest?
  - Will they engage?
  - Do they have the capacity to engage <u>long-term</u>?
  - Are there understood/documented "*Rules of Engagement*"?
  - Recruitment on-going as individuals/entities ebb-and-flow.

The problem with SH's/collaborative efforts Is you don't always get to choose who shows up and gets involved.

Flagstaff Watershed Protection Project

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Champions?

- **C's**
  - **More be more difficult to identify – *those who can and/or should speak-up,***
  - **BUT, will they?**
    - **Do they have "standing" (ie – *juice*)?**
    - **Are they effective?**
    - **Are they single-event type, or multiple-use?**
  - **OR, will they emerge over-time and in unexpected places?**
  - **If so, how to we recognize and prepare them?**
  - **What audiences will they reach?**
  - **Will they be an independent agent, or chaperoned? (*Do you trust them to stay on-message?)***
  - **Do they understand the "*Rules of Engagement*"?**
  - **How do you keep them "current"?**

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Opponents – Real/Known or Potential?

- Definition?
- Threat assessment,
  - *Who (prior history/knowledge of entity)?*
  - *Voiced or silence?*
  - *Damage/impact of our goals?*
  - *Key players?*
  - *Leverage?*
- Plan to address?
  - *Strategy – Confront, Neutralize, Ignore, Win-Over*
  - *What (actions)?*
  - *When?*
  - *How?*
  - *Who?*
  - *Desired end-state (outcome)?*

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More Info?

Paul Summerfelt
psummerfelt@flagstaffaz.gov
928.213.2509

Matt Millar
mmillar@flagstaffaz.gov
928.213.2512

www.flagstaff.az.gov.wildlandfire

www.flagstaffwatershedprotection.org

www.gffp.org

http://nau.edu/eri/banner/schulz-fire/

http://www.flagstaffwatershedprotection.org/fwpp-cost-avoidance-study/

https://nau.edu/eri/banner/flagstaff-watershed-protection-project--creating-solutions-through-community-partnerships/

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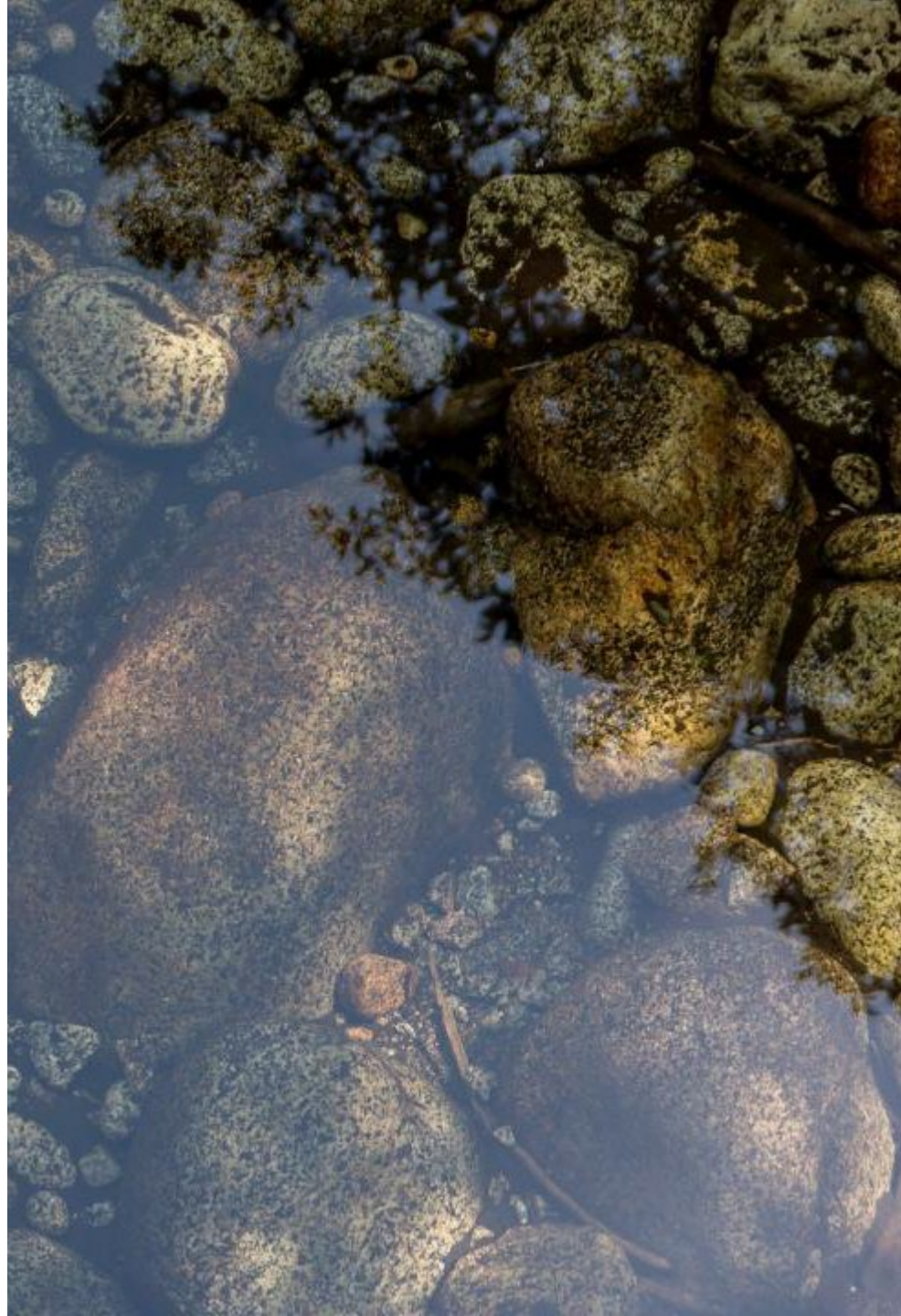
Exercise – Stakeholder Analysis

At your table, use the large post-it paper to conduct an initial stakeholder analysis.

Post your analysis on the wall for later reference.

Transfer your information to **slides 10 to 12** for later reference. Be sure to include:

- A basic stakeholder map, listing high-influence high-interest stakeholders
- Potential champions and their reasons for engaging
- A draft partnership plan



Group Discussion

1. Do the stakeholders and champions you identified already know each other? What do you anticipate as the different dynamics among them, based on whether they do or don't have experience with each other?
2. What do you see as the common threads linking these diverse stakeholders and champions?

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Day 2 - Workshop

Welcome Back

Day 2 - Agenda

Time	Topics
9:00 – 9:15 AM	Welcome
9:15 – 10:45 AM	What is it going to Cost?
10:45 – 11:00	BREAK
11:00 – 12:00	Measures and Accountability
12:00 – 12:45	LUNCH
12:45-1:45 PM	Risk identification: Do You Have the Capacity?
1:45-4:00 PM	Pull it all Together in an Action Plan
4:00-5:00 PM	Closeout Session
6:30 PM	No Host Group Dinner at a Santa Fe Restaurant

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What is it Going to Cost?

Objectives:

- Identify the types of value that each conservation activity holds for each stakeholder.
- Based on the SWP activities proposed as a solution and the identified values the stakeholders place on those, identify potential funding sources.
- Develop a clear action plan for estimating the overall total costs and potential funding sources.

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Key Concepts: What is it Going to Cost?

- Wrestling with values that accrue to the public in general versus values that accrue to specific stakeholders is a critical step in the Feasibility Phase.
- The purpose of estimating costs is to get a high-level view of the funding that will be needed to pay for the solutions/interventions.
- Understanding what motivates stakeholders and champions is key to assessing financial feasibility, often measured by willingness to pay studies.

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WATER FUNDS

Mentor Presentation

Jeffrey Cowan

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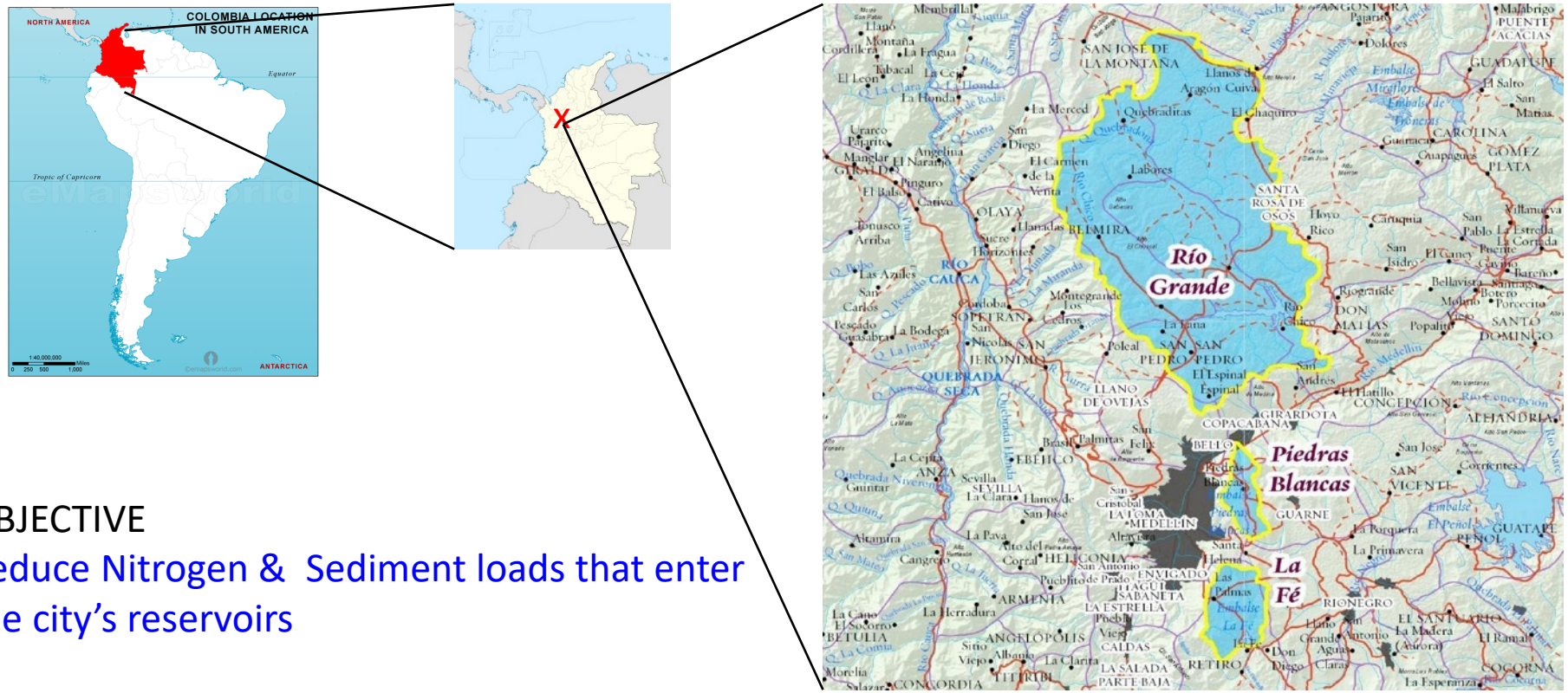
Cuenca Verde - Medellin Water Fund



OBJECTIVE

Reduce Nitrogen & Sediment loads that enter the city's reservoirs

GOALS:

23,500 HAs under sustainable management practices (Reforestation, restoration, stream buffers, sustainable cattle ranching) over a 5-year period.

11% N reduction

28% Sediment reduction

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History

- **Empresas Públicas de Medellin (EPM)**
  - Multi-Utility: Water + Wastewater + Electricity + Telecom
  - Reputation: Effective + Efficient
  - Innovative: Green/Grey Investments: Protected Areas + PES

- **2013 Cuenca Verde launched**
  - Manage natural infrastructure strategy
  - Scale + Long-term

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Learn More

http://www.cuencaverde.org

http://waterfunds.org

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What Is It Going To Cost?

Financial needs are largely a result of technical studies

- Cuenca Verde's financing needs were estimated at US$21 million for:
  - Required investment in projects (~ US$18m)
  - Annual resources to support the operation (WF & Conservation)

	Portafolio de calidad y sedimentos			Portafolio de Calidad				Portafolio de Sedimentos			
	Actividad	Area (Has)	Costo total ($)	Actividad	Area (Has)	Costo total ($)	Reducción de N	Actividad	Area (Has)	Costo total ($)	Reducción de sedimentos
RIOGRANDE II	Aislamiento	1	$ 926.192	Aislamiento	118	$ 152.242.836		Aislamiento	-	$ 0	
	Conservación	449	$ 89.838.000	Conservación	14.153	$ 2.830.698.000		Conservación	1	$ 126.000	
	Enriquecimiento	3	$ 5.972.720	Enriquecimiento	1.707	$ 3.653.570.869	11%	Enriquecimiento	9	$ 20.037.514	28%
	Reforestación	0	$ 0	Reforestación	180	$ 933.856.515		Reforestación	-	$ 0	
	Silvopastoril	29	$ 171.944.400	Silvopastoril	1.569	$ 9.193.223.598		Silvopastoril	2.160	$ 12.658.483.440	
	Incremento Cob Natural	0	$ 0	Incremento Cob Natural	7	$ 16.184.146		Incremento Cob Natural	1.399	$ 2.995.415.615	
	TOTAL	482	$ 268.681.313	TOTAL	17.735	16.779.775.964		TOTAL	3.569	15.674.062.568	
LA FE	Conservación	0	$ 0	Conservación	423	$ 84.690.000		Conservación	4	$ 702.000	
	Enriquecimiento	107	$ 230.046.070	Enriquecimiento	460	$ 984.150.187		Enriquecimiento	59	$ 126.583.139	
	Reforestación	4	$ 21.934.661	Reforestación	3	$ 15.867.627	9%	Reforestación	2	$ 10.733.983	27%
	Silvopastoril	27	$ 155.593.859	Silvopastoril	131	$ 767.947.995		Silvopastoril	171	$ 999.492.755	
	Incremento Cob Natural	-	$ 0	Incremento Cob Natural	-	$ 0		Incremento Cob Natural	423	$ 904.578.138	
	TOTAL	139	407.574.589	TOTAL	1.017	1.852.655.810		TOTAL	658	2.042.090.015	
GRAN TOTAL		621	$ 676.255.902		18.751	$ 18.632.431.774			4.227	$ 17.716.152.583	
COSTO TOTAL DEL PORTAFOLIO($COL - US)										$ 37.024.840.259	$ 18.512.420
AREA TOTAL DEL PORTAFOLIO (Has)										23.599	

Who's Going To Pay?

CONSERVATION ACTIVITY	VALUE	INTERESTED STAKHOLDER
Key ecosystem protection (forests, paramo, wetlands)	Sediments retention water purification water regulation	• Water utilities ● ● • Environmental authorities & government agencies ● • Water related industries ●
	Biodiversity conservation	• Public at large ● • Tourists ● • Research institutes ●
Reforestation	Sediments retention water purification water regulation	• Water utilities ● ● • Environmental authorities & government agencies ● • Water related industries ●
	Biodiversity conservation	• Public at large ● • Tourists ● • Research institutes ● ●
Riparian revegetation	Sediments retention water purification water regulation	• Water utilities ● • Environmental authorities & government agencies ● • Water related industries ●
	Biodiversity conservation	• Public at large ● • Tourists ● • Research institutes ● ●
Best agriculture management practices	Sediments retention, nitrogen and phosphorus retention, additional income for landowners	• Public at large ● • Environmental authorities & government agencies ● • Agricultural industry ●

● Public
● Private

EPM's Motivation

To have a mechanism to prevent future environmental risks regarding the provision of water service in the city of Medellín and the Valley of Aburrá.

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Highlighted

- Strong and focused technical studies + Interconnected
- Stakeholder Analysis + Champion
- Draw strong and clear link between Values/Activities with Stakeholder interest + Maintain WS & Portfolio perspectives
- Story + Understanding motivations and Interests
- Timing and Leadership regarding Stakeholders & Champions

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THANK YOU

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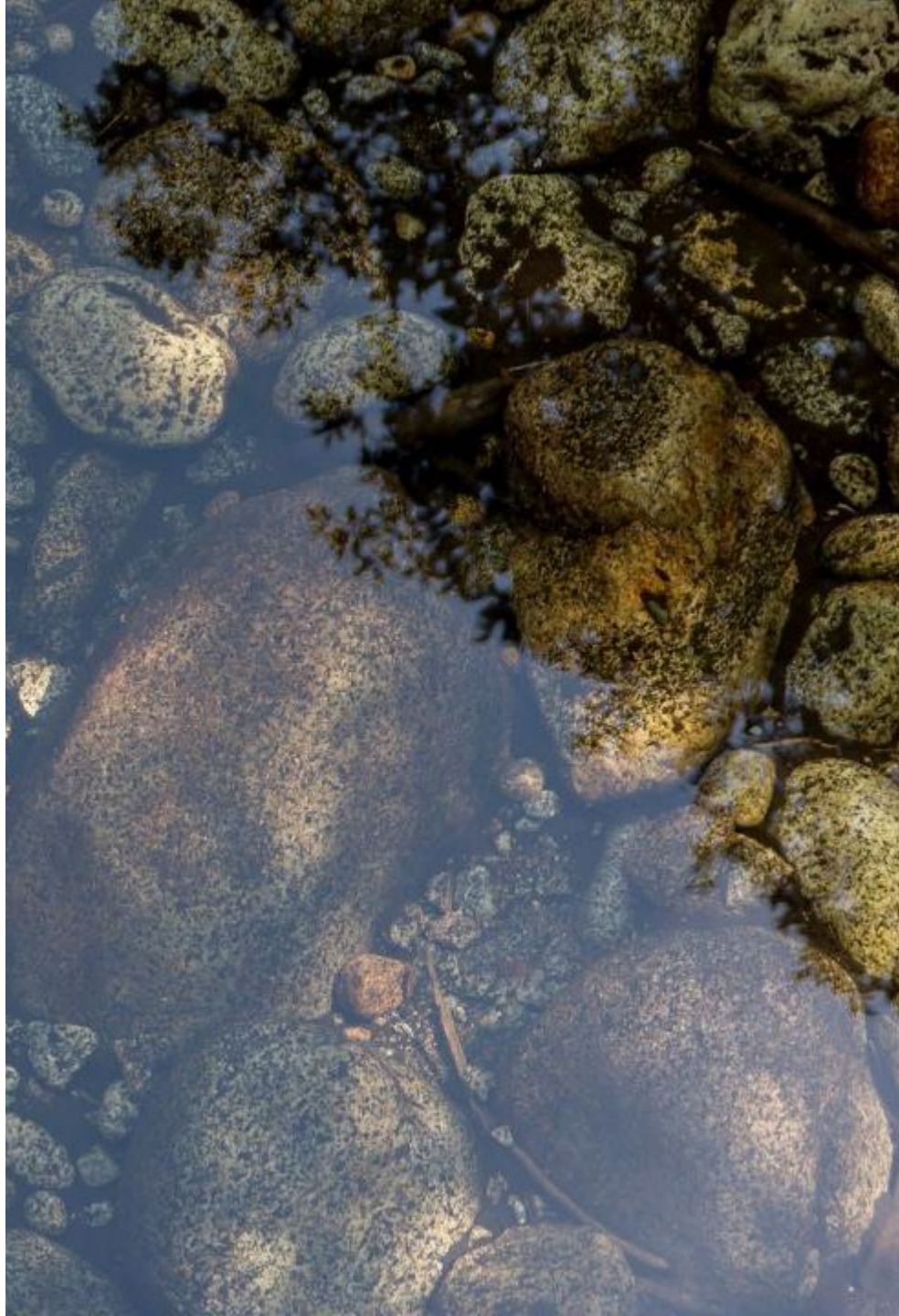
Exercise – Total Intervention Cost

At your table, sketch out an estimate of the overall total intervention cost.

Complete **slide 13** by:

- Creating a table that connects proposed activities to types of value and interested stakeholders, while specifying the sector (e.g. private, public, civil society) and relative influence you believe they would hold in a water fund (e.g. low, medium, high).
- Creating an action plan for estimating the overall total costs and potential funding sources.



Group Discussion

1. What do you think will be the differences in stakeholder willingness to pay for broad public values? Will willingness to pay be higher for values that accrue to specific stakeholders? In your area, do the stakeholders that accrue the biggest benefits have the means to pay?
2. What are some factors that might shift people's willingness to pay? Do you think education of stakeholders can play a role? If so, how might you approach that?
3. What is your biggest concern when it comes to funding? How can you mitigate that concern?

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Forest Restoration and Local Ballot Measures

May 2, 2017

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Forest Restoration Ballot Measures

Why: Unhealthy forested watersheds pose great fire risk to water supplies, outdoor recreation, and economic vitality of downstream cities in the West (L4P Mission)

How: Adapt our time-tested Conservation Finance approach

What: Secure more local voter approved funding for forest restoration & land conservation to leverage fed/state/private $

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Can we apply our Conservation Finance expertise to pass new ballot measures for forest restoration/conservation?

Shorthand Translation:
“Can we find the next Flagstaff?”

- $200k challenge grant (over 2 years) from U.S. Endowment to identify locations that might consider potential ballot measures

U.S. Endowment for Forestry and Communities

LOR FOUNDATION

THE TRUST FOR PUBLIC LAND

Why did the U.S. Endowment and LOR Foundation come to The Trust for Public Land?

U.S. Endowment for Forestry and Communities

LOR FOUNDATION

THE TRUST FOR PUBLIC LAND

Why did the U.S. Endowment and LOR Foundation come to The Trust for Public Land?

We are the leaders in creating new public funding for land conservation.

- $68 billion created
- 500+ winning measures
- 81% approval rate

U.S. Endowment for Forestry and Communities

LOR FOUNDATION

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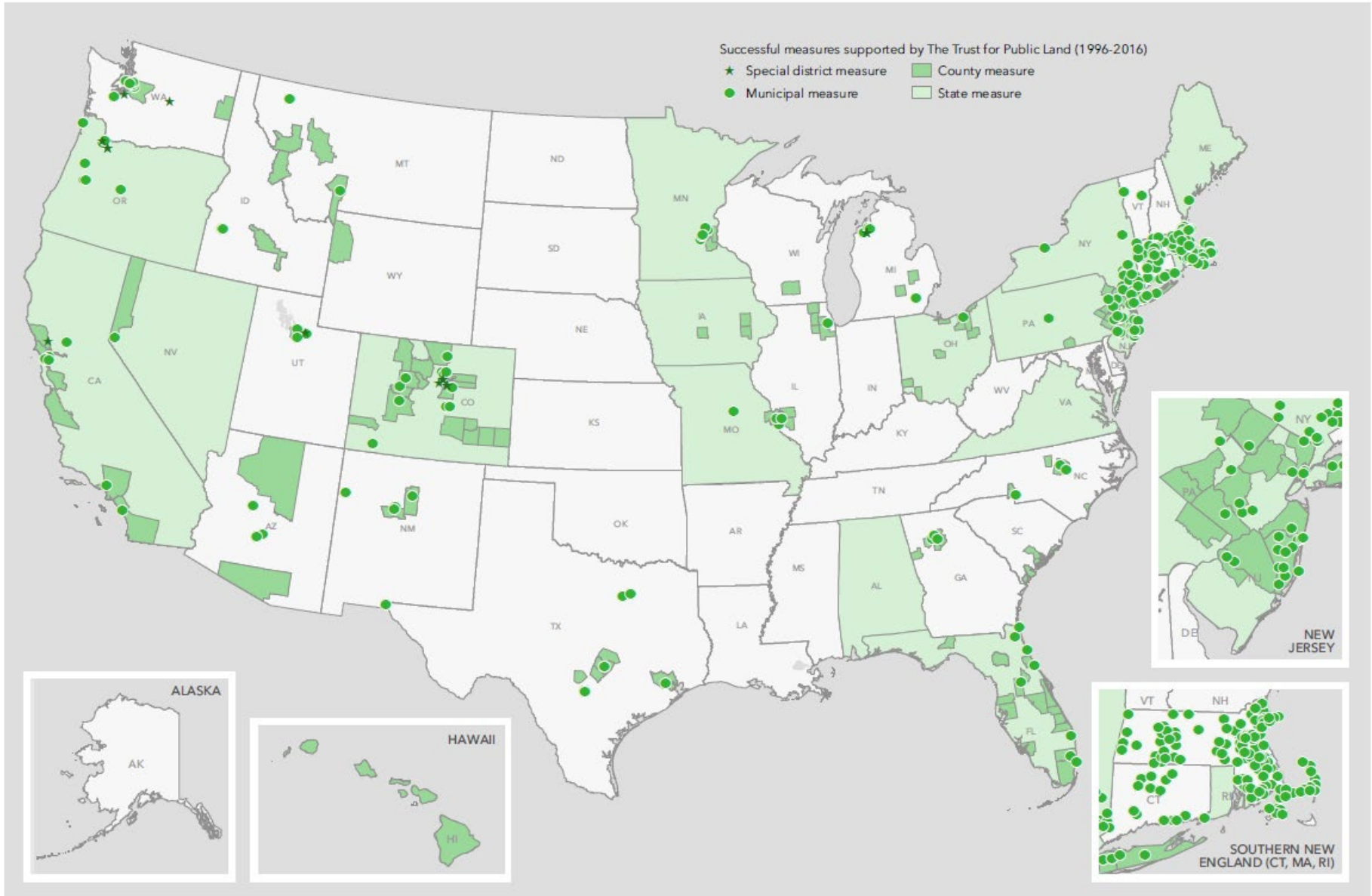

20 Years of Conservation Finance

SUCCESSFUL STATE, COUNTY, MUNICIPAL, AND SPECIAL DISTRICT MEASURES SUPPORTED BY THE TRUST FOR PUBLIC LAND (1996-2016)

LandVote
www.LandVote.org

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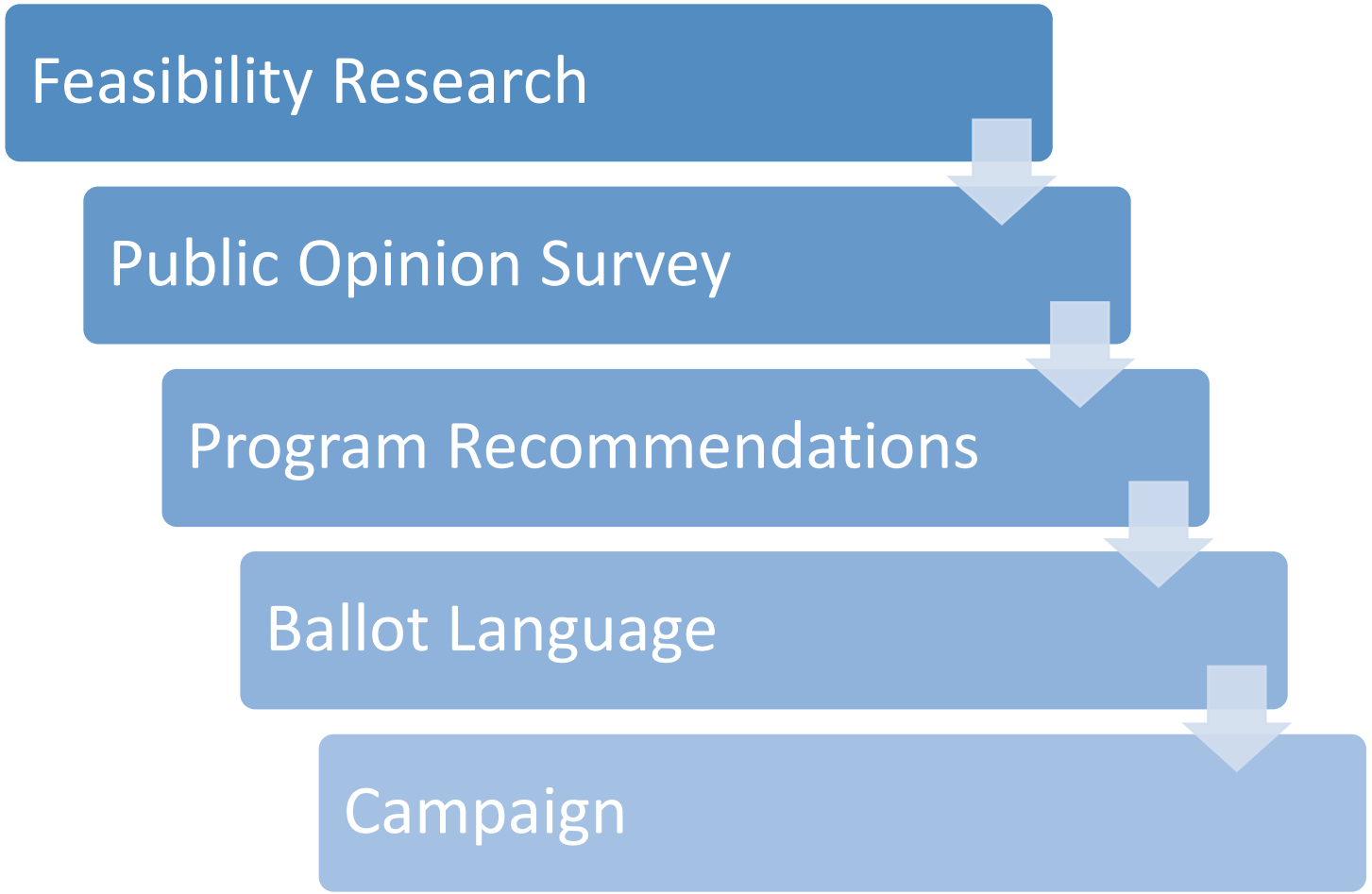
Key Steps for Successful Ballot Measures



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Finding the next Flagstaff

…what happened in Flagstaff?

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Flagstaff Trigger

2010 Schultz Fire

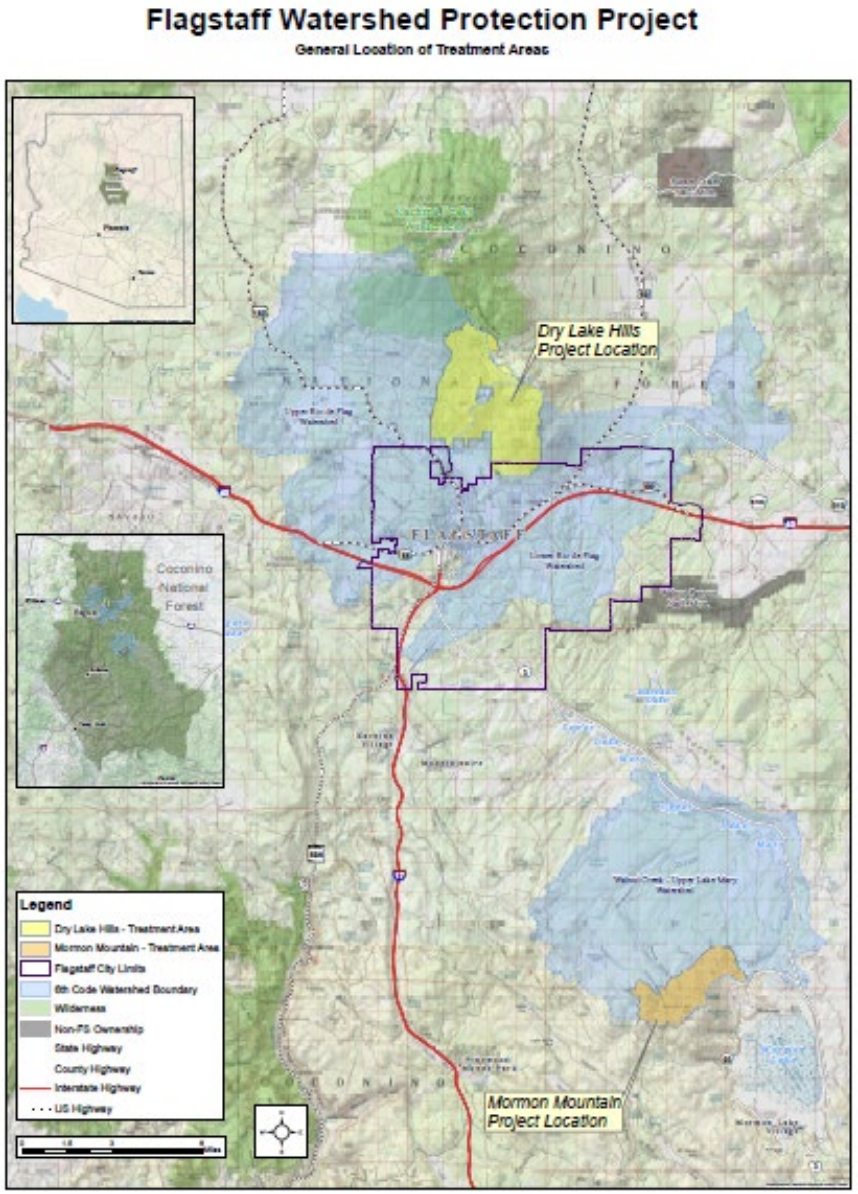
Potential threats to:

- Downtown Flagstaff
- Lake Mary Reservoir
- Northern Arizona U.

FLAGSTAFF WATERSHED PROTECTION PROJECT

Flagstaff Project Objectives

- Restore and protect important watersheds around Flagstaff
- Reduce the risk of unnatural, high-severity wildfire and subsequent flooding on steep slopes through variety of tree thinning methods
- Approx. 15k acres to be treated



Flagstaff Forest Health Ballot Measure, 2012

QUESTION NO. 405

PURPOSE: **Forest Health and Water Supply Protection Project**

Amount: **$10,000,000**

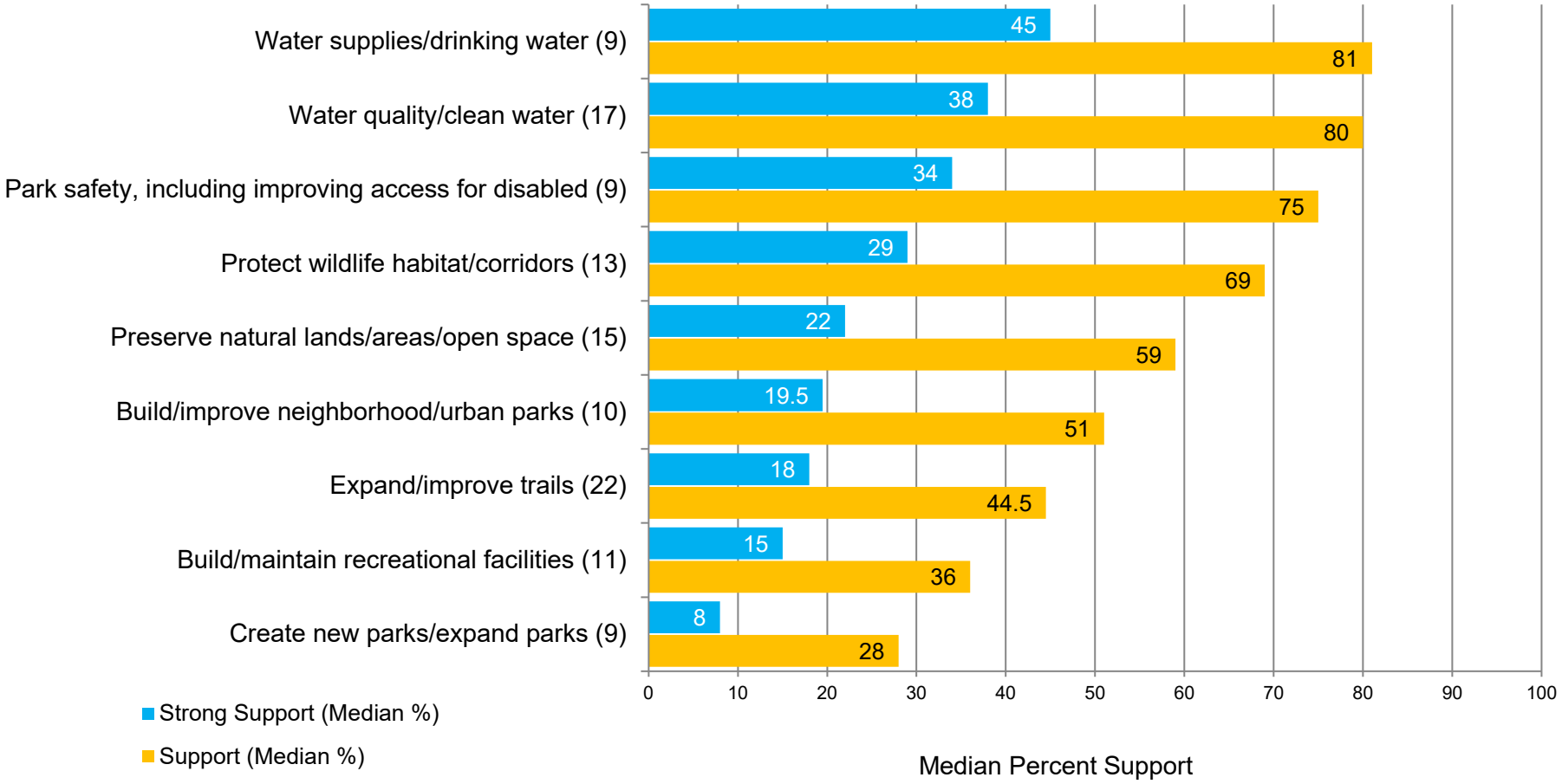
Description: To prevent flood damage to the City of Flagstaff ('City'), and to protect the City water supply from damages which occur from large-scale and/or severe wildfire(s) in two watersheds serving the City, shall the City be authorized to sell and issue general obligation bonds in a principal amount up to $10,000,000:

74% Yes

to expedite and conduct forest treatments in the Dry Lake Hills watershed north of town to reduce wildfire threat, thereby mitigating subsequent flooding to Sunnyside, downtown, the NAU campus, and neighborhoods bordering the Rio de Flag;

to plan and conduct forest treatments in the Lake Mary watershed south of the City to reduce wildfire threat, thereby protecting the storage capacity and water quality of Lake Mary; and

Support for Most Commonly Tested Purposes, 2016



Note: ( ) shows number of times polled

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Forest Restoration Ballot Measure Project

Goal: Identify 3-5 local governments by end of 2018 that might consider a ballot measure to support forest restoration/conservation in order to reach a goal of $50m for restoration/conservation

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Forest Restoration Ballot Measure Project

Key Steps

Phase I: Identify Where to Work

Phase 2: Conduct Readiness Assessments

Phase 3: Complete Feasibility Research

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Leverage Partner Knowledge

Partner with Leaders in the Forest Restoration and Water Field

CARPE DIEM WEST
Our water – Finding solutions together

The Nature Conservancy

WORLD RESOURCES INSTITUTE

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Assess, Map, Identify

- **Carpe Diem West**: Assess 6-7 potential leading cities/water utilities
- **GIS:** Collaborate with WRI to develop an analytical model to ID jurisdictions with strong potential
- **ConFin:** Identify promising forest restoration efforts that may be good readiness assess targets

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Forest Restoration Ballot Measure Project

Key Steps

Phase I: Identify Where to Work

Phase 2: Conduct Readiness Assessments

Phase 3: Complete Feasibility Research

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3 Key Factors in Assessing Readiness

- Recognized need/awareness of problem
- Broad-based community engagement
- Strong political leadership

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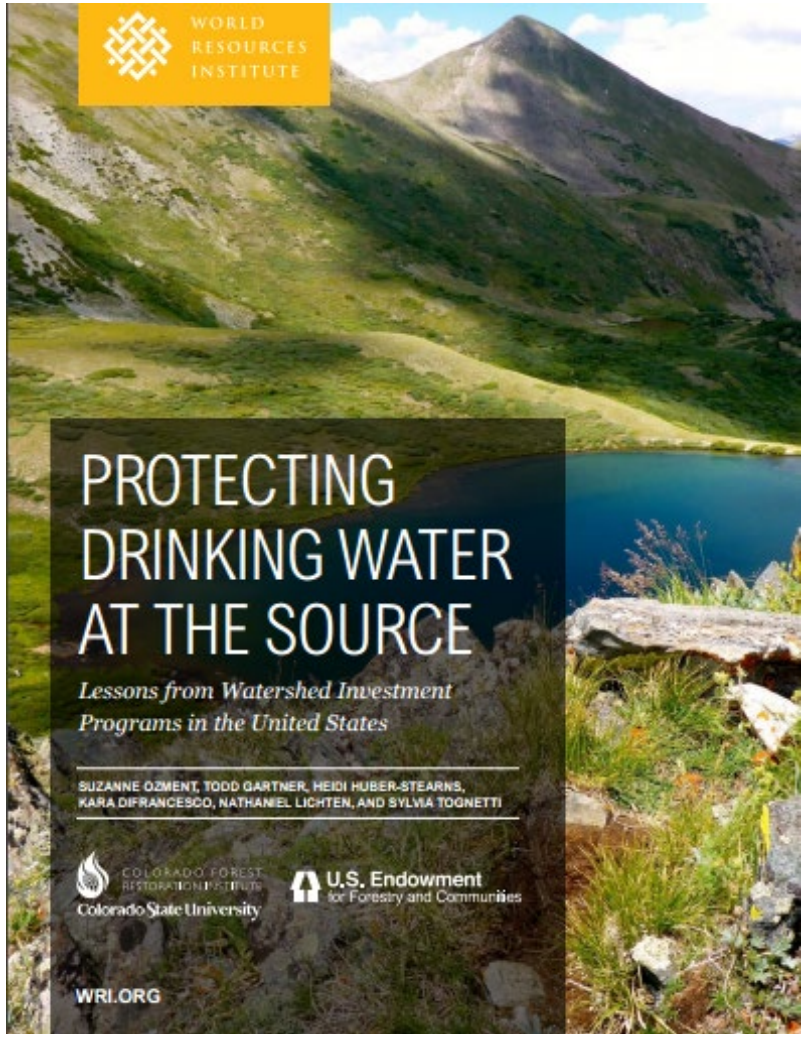
Conduct Readiness Assessments



- 5-6 per year in 2017-18
- First readiness assessment to be conducted by WRI in conjunction with our ConFin research team

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Phase I | **Phase II** | Phase III

Forest Restoration Ballot Measure Project

Key Steps

Phase I: Identify Where to Work

Phase 2: Conduct Readiness Assessments

Phase 3: Complete Feasibility Research

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Complete Feasibility Research Reports

Feasibility Research is our bread and butter research to assess a range of factors that are critical to identify the legal, fiscal, political, electoral factors to design a winning measure

- We conduct feasibility research under technical assistance requests by local elected officials
- We have completed 300+ reports

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For more information, please contact:

Matt Zieper
National Research Director

Matt.zieper@tpl.org

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WATER FUNDS

Mentor Presentation

Lisa Wojnarowski Downes

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Operational Water Funds in the U.S.

Map Legend

- Water Funds

144
largest counties

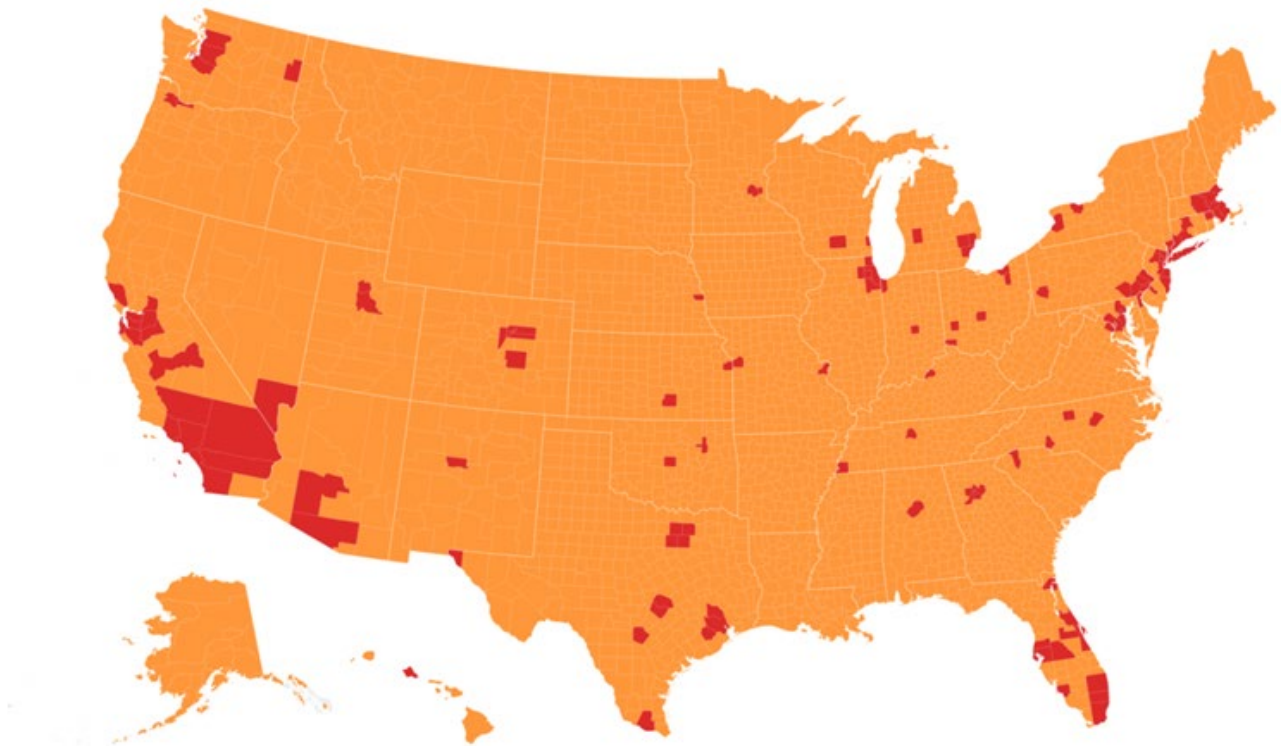
population: 159,524,138

50.03% of total population

2,998
smallest counties

population: 159,332,918

49.97% of total population



Population Estimate, as of July 1, 2014

dadaviz.com

Protecting Minnesota's Headwaters

What happens on our **Lands** determines the health of our **Waters** Together we can protect our lakes, rivers and drinking water

LOSING GROUND

Minnesota national rank

#1 in WETLAND LOSS

#2 in DEFORESTATION

Lost to cropland conversion

101,000 ACRES

from 2008–2012 in Minnesota's Mississippi River Headwaters Area

CLEAN WATER IS A CHOICE

Cropland ⬆ by **5%**,

Nitrogen in Crow Wing River ⬆ by **20%**

Forest cover ⬇ by **10%**

Water treatment costs $ ⬆ by **20%**

PROTECTING OUR WATER AND WAY OF LIFE

More than **1,000,000** MINNESOTANS depend on the Mississippi River for drinking water

350 SPECIES *of wildlife* including threatened and endangered plants & animals

Minnesota's **$2.8** BILLION *Recreational fishing economy*

Minnesota is a **Top** U.S. PRODUCER of *wild rice*, food for people and wildlife

Vital *North American flyway*

50% of all continental birds

40% of all waterfowl

HEALTHY FORESTS, GRASSLANDS AND WETLANDS

Filter and replenish drinking water supply.

Provide habitat for native plants and wildlife.

Absorb and store runoff, reducing flooding impact.

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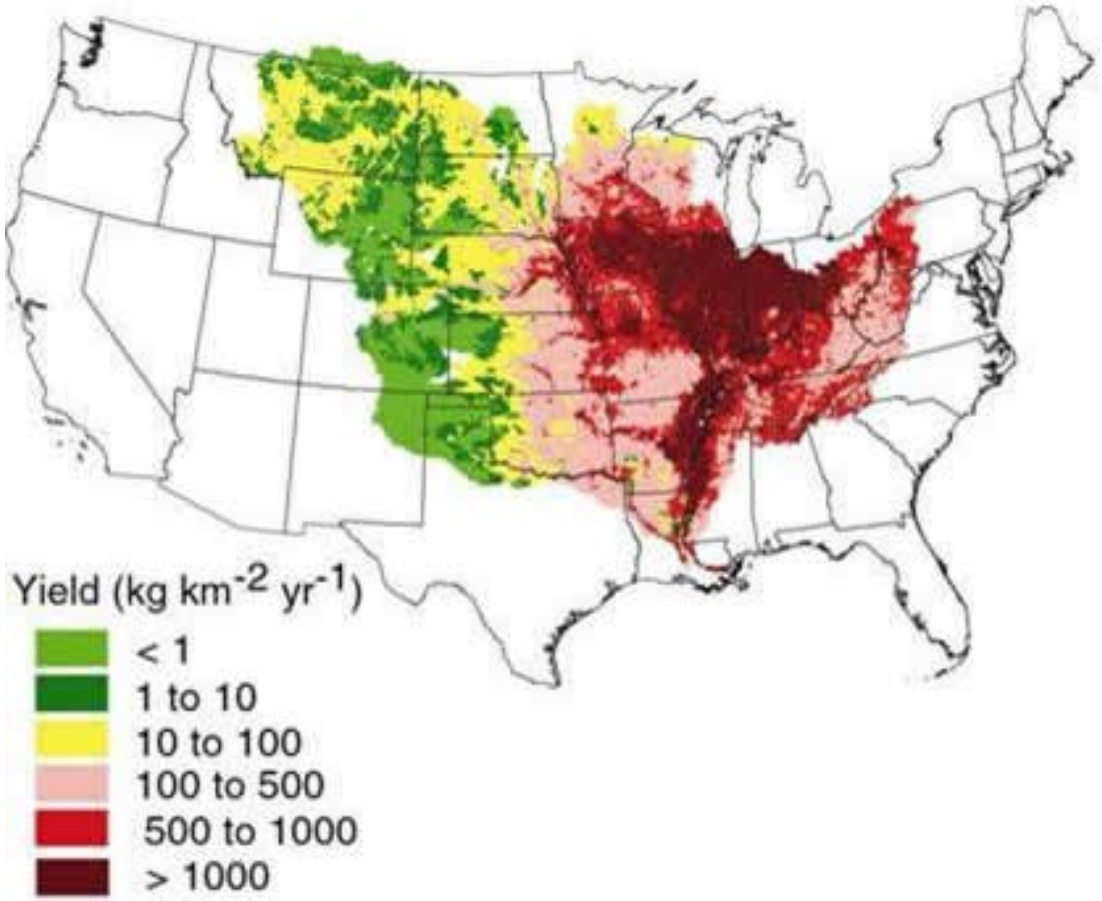
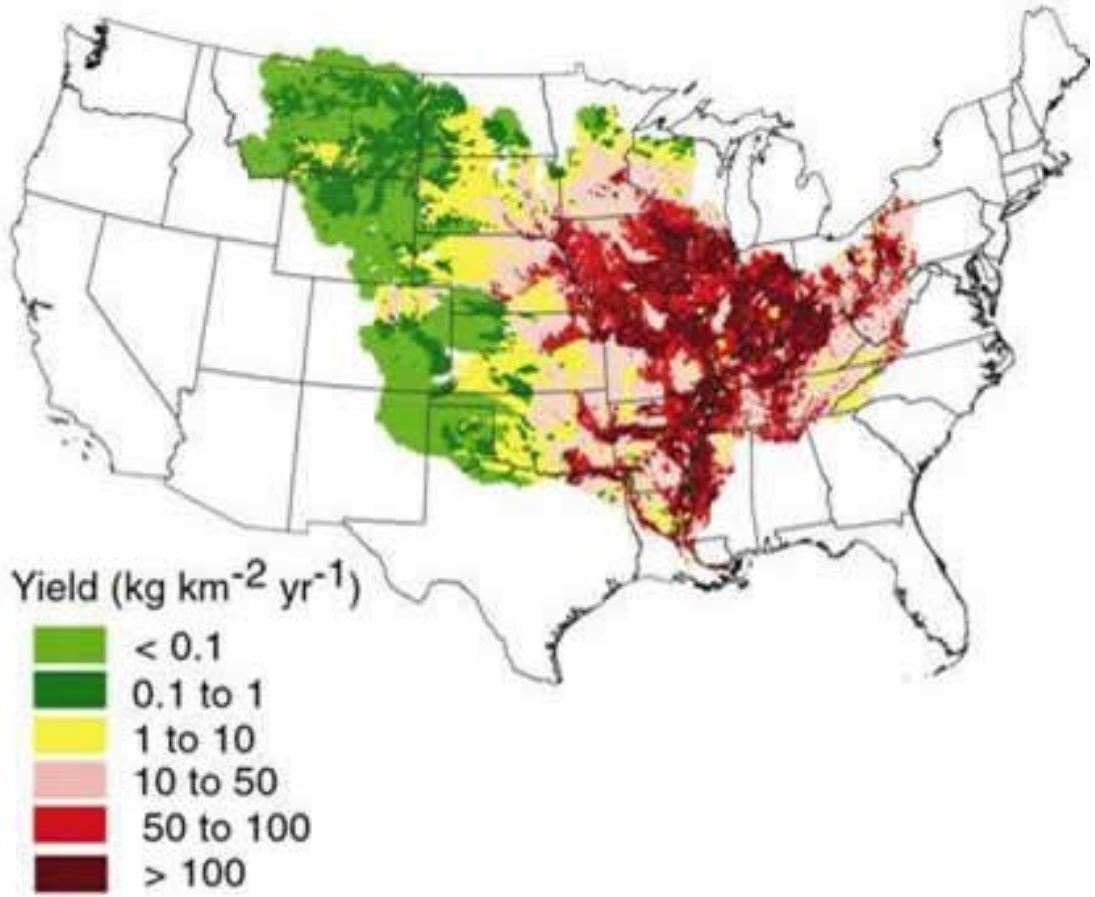
PROTECTING MINNESOTA'S HEADWATERS

Total Nitrogen

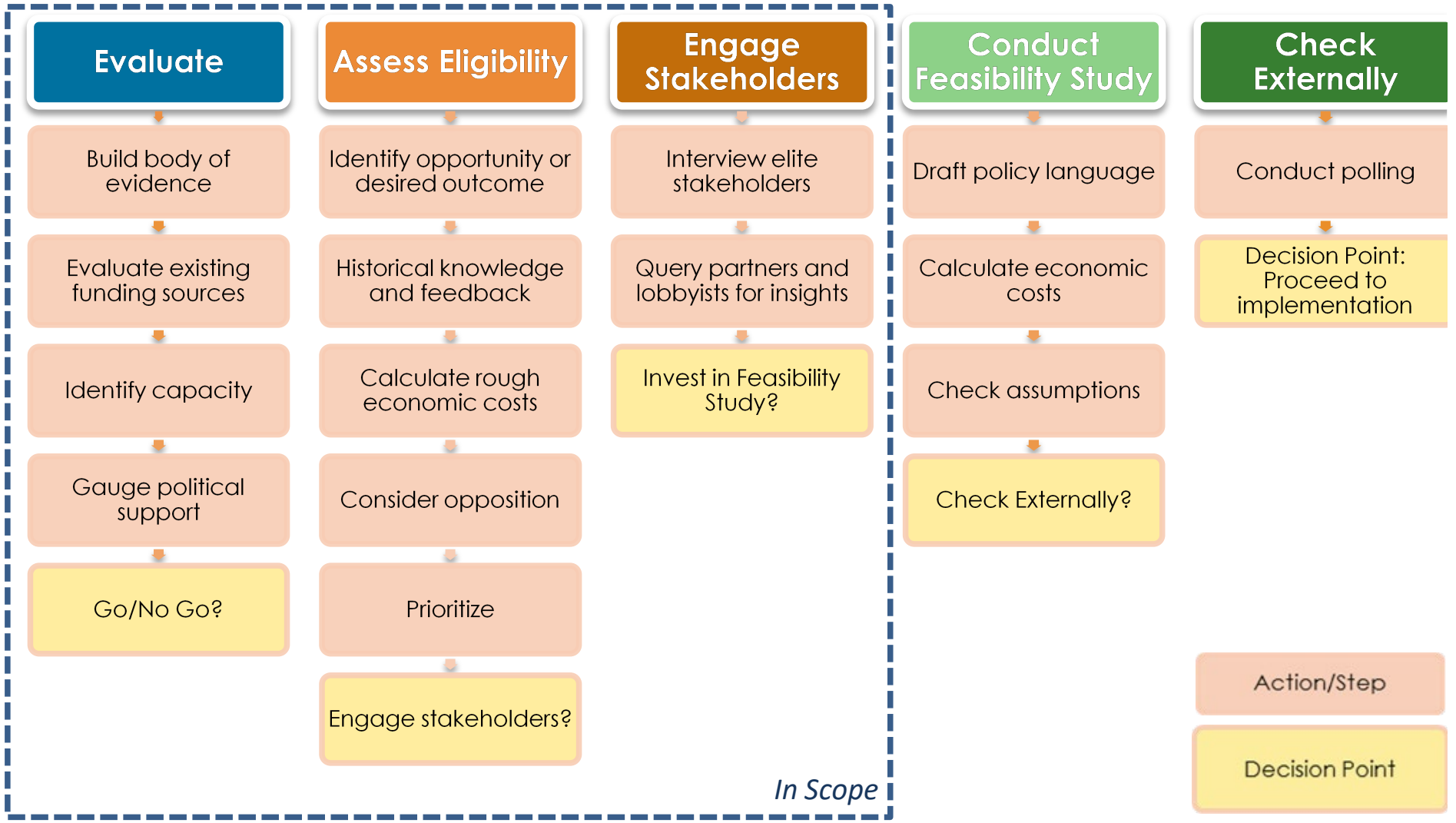


Total Phosphorus

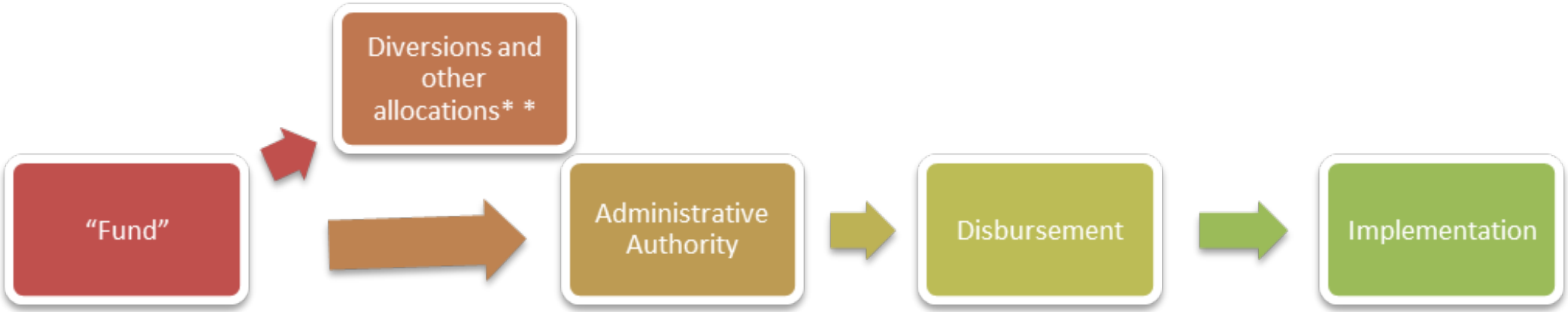


Source: USGS

Public Funding Diagnostic Draft



Funding Architecture General Framework



Measures and Accountability

Objectives:

- Develop a list of measures the team anticipates its key stakeholders will require to join or support a water fund.

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Key Concepts: Measures and Accountability

- Measurement is important for two primary reasons: to gauge whether your solutions are working and to provide accountability to the Water Fund investors (Finance and Science lessons)
- Measurement need not be complicated – only a few key measures are needed and they should be planned and budgeted from the start (Science lesson).
- Determining preliminary measures can be a good activity for champions to consider in their early phase of working together (Governance lesson).

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WATER FUNDS

Mentor Presentation: Measures and Accountability

Kari Vigerstol

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Measures and Accountability

- Measures track how well we are meeting outcomes, and provide information for adaptive management
- They are a way to hold ourselves accountable to partners, funders and other stakeholders
- We need measures at various time and spatial scales
- Measures should be an integrated part of the project from the feasibility through maturation stages
- We need to consider how to support measures design, implementation and operation (collection and analysis) throughout the project cycle

Measures and Accountability

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Connecting measures to desired outcomes

The types of measures we track, and how often, are driven by those who we are accountable to:

- Funders
- Decision makers
- Other water fund participants
- Communities that might be impacted by water funds activities
- Ecosystems

At minimum measures should answer the questions:

- Are the water fund objectives being met?
- In the process, are we avoiding any negative impacts?

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Challenge: timing and scale

Timing and scale are connected:

- It takes time to get to the geographic scale needed to create change
- It also takes time to measure valid results over a variety of hydrologic years

How can we measure outcomes along the way?

- Short-term, medium-term and long-term measures
- Measures at different spatial scales
- Proxy measures that show progress

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Challenge: capacity and funding

One of the biggest challenges we hear from water fund teams is that they don't have the capacity and / or funding for a strong monitoring program

But measures are critical for demonstrating to stakeholders that we are delivering on water fund outcomes

Funding options:

- Include funding for measures in any water fund ask for support
- Account for full cost of measures in the design and operations budget of the water fund (and incorporated into ongoing funding)
- Fundraise exclusively for measures

Addressing the capacity issue:

- Hire consultants
- Fund a specific position (could be shared across funds)
- Partner, for ex. with a university

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Example: Beer and fishing in Silver Creek, Idaho

Measures and Accountability

Measures:

- # farmers engaged
- Acres with improved ag practices / trees planted
- Gallons of water saved
- Energy saved (avoided pumping)
- Cost savings to farmers
- Pounds of barley produced per acre
- Flow and temperature in downstream creek
- Habitat surveys

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Example: Rio de Janeiro Water and Forest Producer Project

Measures:

- # landowners contracted
- Hectares of land restored or protected
- Biodiversity – fish, birds and terrestrial plants
- Hydrologic – fog capture and flows
- Water quality – turbidity
- Carbon storage
- Socioeconomic impacts

Monitoring partners:

Environmental state agencies
Universities
Agricultural research corporation

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Example: Upper Tana – Nairobi Water Fund

Measures:

- Turbidity in subwatersheds, sediment load in reservoirs & turbidity at intake (by # of days exceeding max)
- Change in water use by farmers
- Change in crop productivity
- Change in poverty status & resilience
- Change in upstream erosion
- Number of trees per acre
- Number of river km protected
- Co2 storage

Partners:

- Water agencies – WRUAs and WRMA
- Nairobi Water & Sewerage
- Frigoken (private company)
- Community Forestry Associations
- Greenbelt Movement & Rainforest Alliance
- SACDP

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In conclusion..

- Measure early and often
- Target measures towards outcomes and partners to which the water fund is held accountable
- Consider measures at different spatial and time scales
- Partner when appropriate and build on existing monitoring systems
- Plan for funding and capacity needed to design, implement and maintain a robust measurement system

For more guidance on water fund monitoring, please see the monitoring primer at:
https://www.nature.org/media/freshwater/Water_Funds_Primer_on_Monitoring_2013.pdf

and examples of Latin American water fund monitoring at
http://waterfunds.org/sites/default/files/study-cases-monitoreo-hidrico-water-funds_1.pdf

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Exercise – Measures and Accountability

At your table, identify what stakeholders need to see (to open their wallets) and how you will demonstrate successful outcomes.

Complete **slide 14** by:

- Creating a list of measures that key stakeholders will require to join or support your water fund.
- Do you think data will be readily available? What do you anticipate will be the challenges to collecting and reporting on these measures?

Group Discussion

1. How do you think talking about measures will help your champions and stakeholders become closer aligned?
2. Are your likely Water Fund investors accustomed to seeing these measures? If not, how might you introduce them to the concepts?

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Risk Identification

Objectives:

- Create a checklist of potential risks, specification of their relative importance, and corresponding mitigation strategies for each.

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Key Concepts: Risk Identification

- To identify risks, you need to have information from the Science, Finance and Implementation areas of the Feasibility phase as they answer the questions about risk:
    - Multi-Stakeholder Governance
    - Science-Based Decision-Making
    - Finance
    - Implementation

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WATER FUNDS Feasibility: Risks

Mentor Presentation: Silvia Benitez

Freshwater Manager Latin America

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FEASIBILITY STUDY

Risks assesment :

Science:

- Clear objective for WF
- Scope and scale

- Multi-stakeholder/Governace/Policy
  - Legally and politically feasible
  - Key stakeholders can get together under common vision
  - Clear role of WF
- Finance
  - Clear potential funders (water users)
  - Long-term revenues possible and sufficient to achieve WF goals
- Implementation
  - Capacity
  - key stakeholders interest (e.g landowners)

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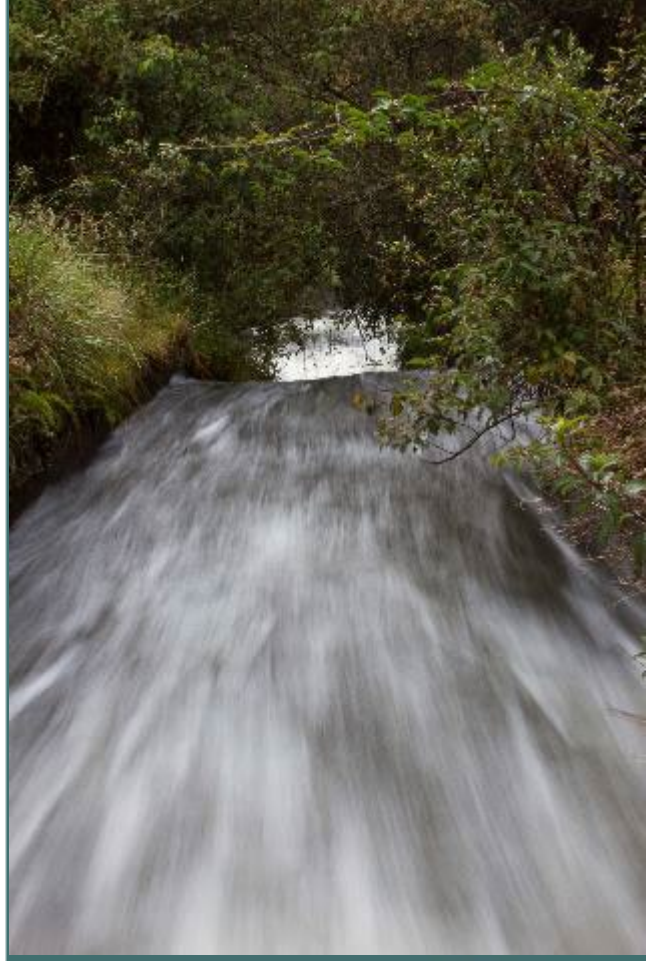
FEASIBILITY STUDY

Should have an understanding of the water risks and how a Water Fund can positively contribute to reduce the risk within a defined area

- Risk/Problem:
  - will define the objective of the water fund and scale (*includes analyzing if WF is the best vehicle to solve it*)
  - will define main stakeholders involved/interested (investors)
  - will define scientific studies needed on design phase
  - Will define the strategies/activities of the water fund



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FEASIBILITY STUDY

Risk and sources of risks should be defined

Example:

Risk: Sediments affecting water reservoir for a city

Sources: Deforestation, bad agricultural practices, landslides, road construction

Strategies to address the sources of risk are different (natural infrastructure will have different contribution depending on the magnitude and the source of the risk, stakeholders can also be different)

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FEASIBILITY STUDY

Main water risk/problem: Water quality problems for population & nature

Risk Source: pollution from oil extraction – (main solution not related with natural infrastructure solutions but to pollution control and remediation)

Other factors from feasibility study:

- Rural population dispersed - almost 50% population did not receive water from pipes

- Geographic situation hard to delineate: not common watershed basin / to large basin

- Stakeholders related with the problem – geographically dispersed, not linked to common watershed

-Not viable to develop a multi-stakeholder governance scheme

Conclusion: No-Go: Water Fund is not the right mechanisms for this situation

Project Name
Sucumbios-Ecuador (Amazon)

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Feasibility STUDY

Feasibility assessment in development:

- Risk analysis: (infiltration/recharge areas)
  - Defining geographic area and scope for the fund
  - Defining key studies for water funds design (review TOR)
  - Aligning stakeholders for future commitment

To be completed in May 2017

Mexico City Water Fund

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Project Name

Thanks – Silvia Benitez

sbenitez@tnc.org

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Exercise – Identify Risks

Complete **slide 15** by:

- Identifying risks and their importance.
- Prioritize the list of risks.
- Brainstorm and create a list of mitigation strategies for each risk.

What is the riskiest aspect of your Water Fund proposal?

Group Discussion

1. What do you think of the risk factors they identified and their mitigation? Are there other ways to think about this risk, or other suggestions you have? If your area shares the same risks, are there opportunities to share the risk and learn from each other?

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Pulling it All Together in an Action Plan

Objectives:

- By using the learnings and outputs acquired through the online training and workshop exercises, develop an action plan that illustrates:
    - Key relationships between each component
    - Process ahead, the scope of work for completing a Feasibility Study, and the status of corresponding actions
    - Capacity needed to complete a Feasibility Study and how to mobilize available resources against it
- The risks that should be considered when deciding if a water fund is the right tool for addressing the identified water issues

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Key Concepts: Action Plans

- Feasibility studies are undertaken to test:
  - Eligibility
  - A water fund's feasibility to positively contribute to water security within a defined area
- Feasibility studies can vary widely in scope, cost and time to complete but are important to complete and document the initial phase of water fund consideration
- Feasibility studies can serve as critical tools for strategic needs.
- Don't reinvent the wheel: seek lessons
- Recommend that specific tasks be completed by experts (within and outside of team).
  - Consider these costs and corresponding timeframes when creating the Action Plan

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WATER FUNDS
Feasibility: Close out

Silvia Benitez
Freshwater Manager Latin America

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FEASIBILITY PHASE - DELIVERABLES

- **Feasibility Report** – including action plan for next steps:
    - Is a water fund feasible?
    - What studies should be completed on design phase
    - Design phase budget

- **Formal Commitment -** With key stakeholders (likely future members of the Water Fund's Steering Committee) committing resources for development of the Water Fund Design – e.g. MOU

Feasibility phase duration: approx. 6 months

Design phase duration: approx. 12 months

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Feasibility report – Table of contents

EXECUTIVE SUMMARY

SOURCE WATER FOR THE CITY

- Utility.
- Watershed

WATERSHED DESCRIPTION

Physical Aspects

- Land Use
- Climate Change Susceptibility

SOCIAL AND INSTITUTIONAL CONTEXT

- Stakeholders.
- Champions.
- Social and Institutional Framework.
- Vulnerable Groups
- Existing Initiatives

LEGAL CONTEXT

- Legislation
- Regulatory Framework

WATER PROBLEM & SOLUTIONS

- Urban Water Security
- Environmental Water Management
- Resilience to water related natural disasters.

FEASIBILITY ASSESMENT

- Problem Selection and Definition
- Funding Model
- Water Fund Contribution.
- Potential Solutions
- Cost and Benefit Analysis
- Go/No Go Recommendation
- concept design phase work plan

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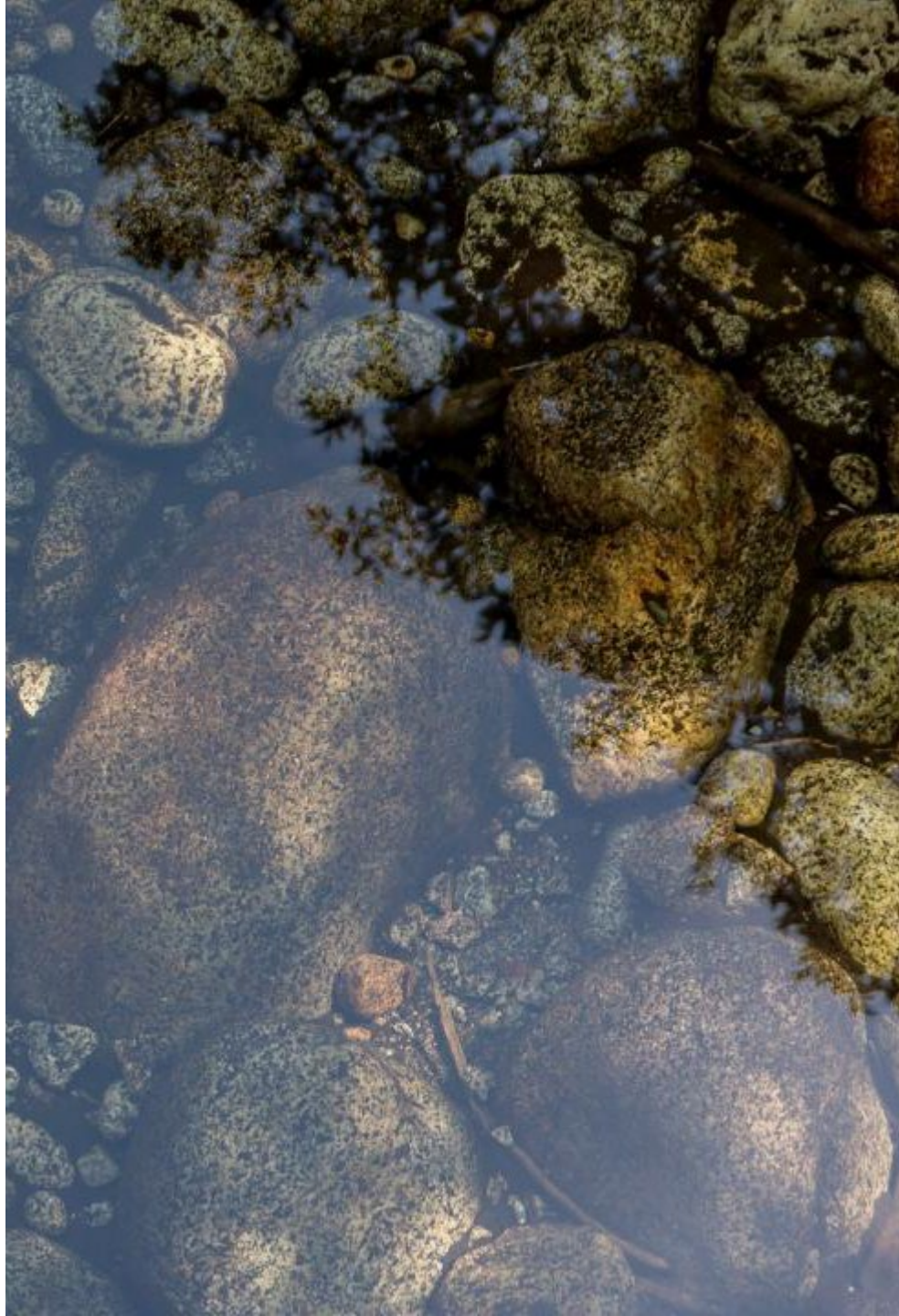
Exercise – Create an Action Plan

At your table, review the slides you created over the past 2 days and create an action plan for your feasibility phase work.

- Set milestones to achieve in 3 months, 6 months, and one year.
- Complete **slide 16** by adding your milestones and the top commitment for each team member
- Select a team member to report out on your plan and the commitments you have made. 5 minutes to present per team.



Group Discussion

1. What do you think will be most useful in terms of peer-learning to help you complete the action plan? Considering the range of activities and commitments made by each group, are there ways that you can support and help each other?
2. If your Feasibility Study generates support to move to the Design phase, what kind of continued interaction might you want from the other workshop attendees and mentors?

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Conclusion

- Apply what you learned from the online training through a series of hands-on exercises and presentations.
- Establish a peer/mentor network to foster ongoing learning and mentoring throughout the Water Funds Project Cycle.
- Demonstrate a working knowledge of the fundamental concepts of Governance, Science, Finance, and Implementation through the delivery of an action plan to complete a Feasibility Study at the end of the workshop.
- Engage in applied learning by sharing your experiences and expertise.

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