P3's & Green Infrastructure:
Stakeholder Management & Negotiations

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P3's & Green Infrastructure:
Agenda

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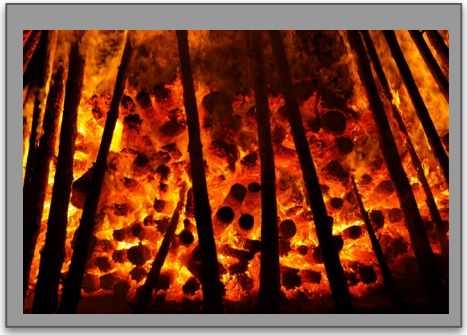
Fringe weather events are becoming the new normal



Extreme Fires have ravaged Northern California, affecting homeowners and polluting air and water sources. Local and regional utilities, the forest agencies, and municipal governments bear massive risk as these events become commonplace.

Cataclysmic Storms continue to hit the East Coast and the Caribbean, causing major damage to buildings and property. Most infrastructure was not built to handle recurring extreme rainstorms and hurricanes. Homeowners, sanitation departments, and local businesses suffer.

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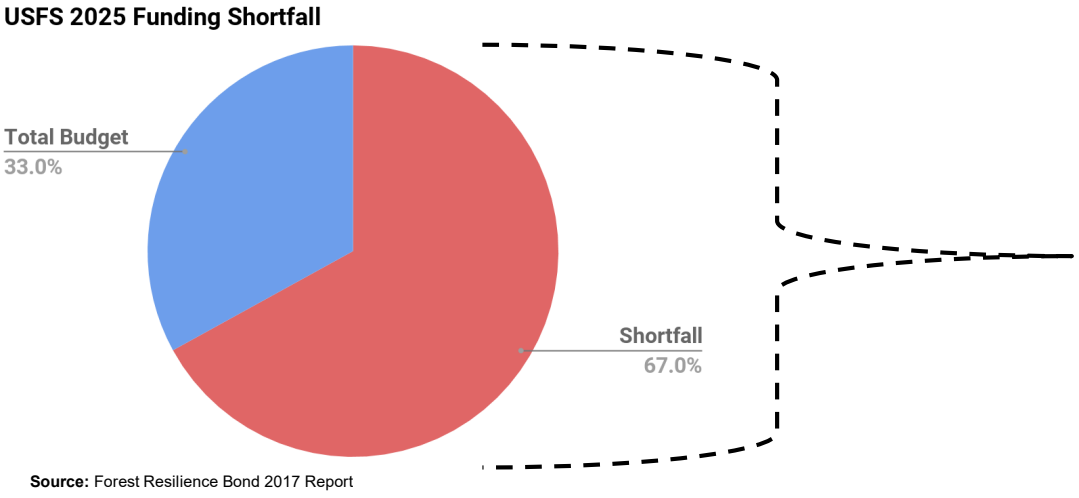
Public funding has been woefully inadequate



Positive NPV projects exist that would:

- Minimize impact of extreme weather events to people and infrastructure
- Reduce the risk that extreme events occur in the first place
- Provide qualitative benefits beyond the direct problem to be solved

A funding shortfall provides an opportunity for private investment to address climate issues

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Moving from "Grey" to "Green" Infrastructure

- Many companies are solving these environmental challenges with ecology
- This includes problems such as wastewater treatment, sewage, and forest resilience
- Green infrastructure provides multiple ancillary benefits such as carbon capture and landscape beautification versus singular benefits from grey infrastructure

Public-Private Partnerships (P3's)

- Due to the multiple stakeholders affected by environmental challenges, P3's are a common way to form a coalition and organize a green infrastructure project
- This includes utility districts, local and regional government, and community groups

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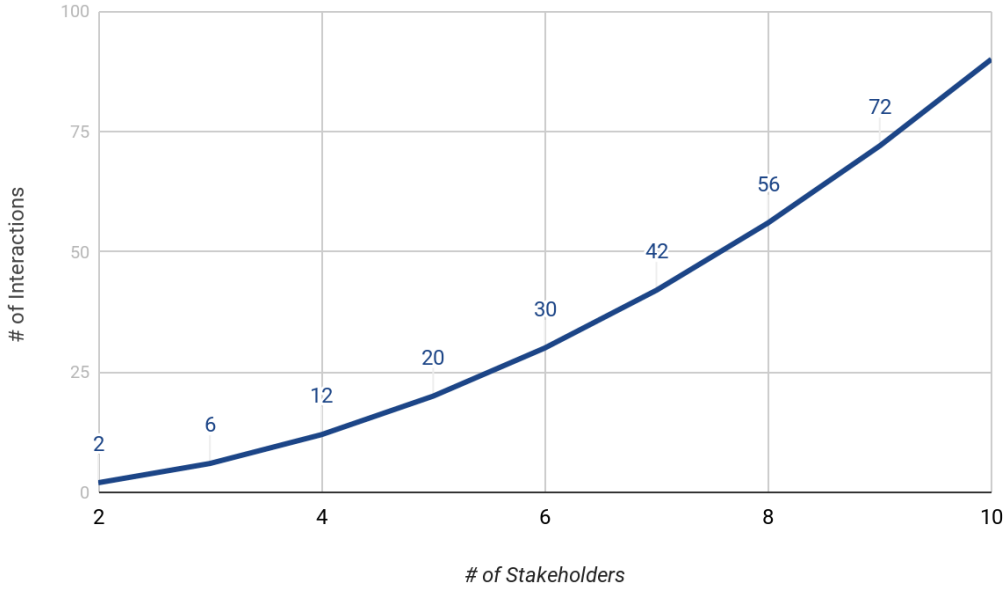
Challenge #1: Multiple Stakeholders



Each additional stakeholder increases the complexity of an agreement at an ***escalating*** rate

The graph on the left depicts the number of relationships when another stakeholder is added to a negotiation

Equation: N * (N-1)

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Challenge #2: Uncertain Outcomes

- Even with effective ecosystem services, devastating natural disasters could still occur
- Risk reduction is still *not* risk elimination
- Lack of availability of insurance products for ecosystem services

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Challenge #3: Pricing & Valuation

- May be difficult to truly value the ecosystem service for each party as it has both tangible and intangible benefits
- Trade-off between accurate measurement and cost
- Capital vs. operating budgets of utilities

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Case Studies

Forest Resilience Bond

- $4M bond to support forest restoration in Tahoe National Forest to reduce wildfire risk
- Involved investors, utilities, and state government agencies
- Brings multiple benefits including risk reduction and improved water quality

DC Water

- $25M tax exempt bond to develop and maintain 'rain gardens' to offset sewage spillover
- Small stakeholder group; investors, DC Water, and deal broker
- Green alternative to more expensive sewage infrastructure

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Drivers of Success

Multiple Stakeholders

- Leverage existing relationships and networks
- Identify promoters and evangelists
- Include inclusion plan prior to negotiating a deal

Uncertain Outcomes

- Simplify performance metrics; if possible
- Monitor performance for education and iterate on future deals
- Define success criteria

Pricing & Valuation

- Identify qualitative considerations such as moral good and politics
- Achieve the "minimum viable product" that addresses parties concerns

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Tools to Success

Criteria	*Definition*	*Company*	*Utility*
Issue(s)	*The issue(s) at hand, including ancillary and underlying issues*	Utility is concerned that water quality may be impacted if a catastrophic fire occurs in their service area; wants other stakeholders to pay a fair price	
Interests	*The underlying interests of the parties performing in the negotiation, including the interests of the agents performing the negotiation (typically listed in order of importance)*	1. Risk Reduction 2. Relationship 3. Money	1. Risk Reduction 2. Reputation 3. Money 4. Morality
Alternatives	*Alternatives to a negotiated agreement*	1. None	1. Other restoration service 2. Accept risk
BATNA, Reservation Value	*Best Alternative (highest ranked from above) and maximum – minimum value acceptable*	1. None	1. Other restoration service - $15M 2. Accept Risk - $20M
Fears	*What is feared as a negative outcome to the negotiation*	1. No further deals 2. Loss of relationship	1. Catastrophic Event 2. Loss of Money
Solutions	*Include potential solutions for the negotiation, including unique items that may help both parties*	Pay for performance; upfront payment and recurring payments associated with coupon	

A negotiation prep sheet may help you identify the following:

- The other stakeholders' interests and the importance of those interests
- The other stakeholders' alternatives, and how they compare to your service
- Potential creative solutions and low-cost high-benefit compromises

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Conclusions

- Limited public funding provides a business opportunity for private ecosystem investment
- Challenges exist in coordinating multiple parties with diverse stakeholders and interests
- Groups have found success creating ecosystem investments by applying stakeholder management methodology
- Empathizing with stakeholders and preparing for a negotiations increases the chances of success

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Q & A