

## ***Conservation Investment Blueprint: Forest Resilience Bond***

***Developed based on the Case Study of Blue Forest Conservation***

### ***i. Overview of the conservation need and opportunity***

Healthy forests maintain clean and abundant water for human consumption, irrigation, industry, and power generation. They also control flooding, sequester carbon, support biological diversity, sustain rural economies, and provide opportunities for recreation. However, the impacts of wildfire, drought, flooding, and insect and disease disturbance are increasingly severe as the consequences of a changing climate and growing development pressures leave forested landscapes vulnerable.

#### **Scale and scope of activities required to address conservation need/opportunity**

Decades of management practices that disrupted the natural fire cycle through near total fire suppression have caused many forests in the western U.S. to become significantly overgrown. Combined with the effects of climate change, overgrown forests have become a dangerous liability, with high density forests causing hazards like wildfire and disease to spread more quickly.

In western states the frequency, scale, and severity of wildfire is increasing; 9 of the 10 worst fire seasons on record have occurred since 2000, and close to 47,000 fires burned more than 7 million acres of forest in 2017 alone (National Interagency Fire Center, 2018). The occurrence of megafires outside the typical summer and early fall months have pushed the US Forest Service (USFS) to use the term “fire year” instead of “fire season.” In 2017 USFS spending on fire suppression exceeded \$2 billion for the first time (USDA, 2017). Over the last five years wildfire has prompted more than \$5 billion in property loss (Insurance Information Institute, 2018).

Forest conditions and human development patterns suggest these alarming trends will continue. In 2017 the USFS identified 58 million acres of National Forest lands as at risk of severe wildfire (USDA Forest Service, 2016). Climate change models show temperatures rising 3-4 degrees and precipitation declining up to 20% in western states by the end of the century, shifts that would intensify fire risk (Future Climate, 2018). In addition, development along the wildland-urban interface continues to put people, homes, and infrastructure in harm’s way – approximately 40% of recent development in the American West occurred in areas at high risk of fire (Glickman & Sherman, 2014).

Fire suppression is consuming an ever increasing portion of the USFS’s budget; between 1995 and 2017 the portion of annually appropriated funding spent on reactively fighting fire grew from 16% to 56% (USDA Forest Service, 2017). With more funds flowing to fire suppression, there is a growing backlog of other work. This includes forest restoration projects that proactively reduce wildfire risk through activities such as mechanical thinning and prescribed burning. In California alone there is a 30-45 year restoration backlog (USDA Forest Service, 2018). There is not sufficient public and philanthropic funding to meet the scale of restoration need faced on National Forest System lands and beyond.

The Forest Resilience Bond (FRB) provides a means to engage private sector investment in work to fund ecological restoration activities that reduce fire risk. By reducing fire risk, forest health treatments protect lives, property and habitat from the devastation of large-scale burns, prevent carbon stored in tree biomass from being released into the atmosphere, and keep sediment from ash, debris and erosion from impacting water quality and heightening treatment costs. Thinning forests also frees up water consumed by overly-dense vegetation to flow downstream for drinking, irrigation, industry, and hydroelectric power generation (Ge, S., Caldwell, V., McNulty, S. G., 2015).

## *ii. Contribution to conservation goals*

### **Contributions to Conservation Goals**

The Forest Resilience Bond (FRB) addresses severe fire risk by enabling private investment to fund the upfront costs of forest restoration work on National Forest System and adjacent landscapes, much of which has historically been funded through annual appropriations. In doing so the FRB increases the pace and scale at which much-needed restoration activities – which reduce fire risk, sustain air and water quality, protect habitat, and prompt rural economic development – can be undertaken. The FRB also establishes a platform through which to collect ecological and economic data, and to quantify the impacts of critical ecosystem services.

## Key Metrics

Blue Forest Conservation works with a variety of research partners, many of whom provide match funding for this work, to quantify and value the expected benefits of forest restoration in order to make a compelling economic case to stakeholders. Progress in the areas below will be measured throughout and following FRB project implementation. Additional ecosystem services not listed in the table below may be included in future FRB projects as the ability to measure and quantify impacts from restoration improves. BFC will engage local research partners to conduct project-specific measurement and valuation work as the FRB model is replicated in new geographies.

### ENHANCED ECOSYSTEM SERVICES GROUPED BY IMPACT TYPE

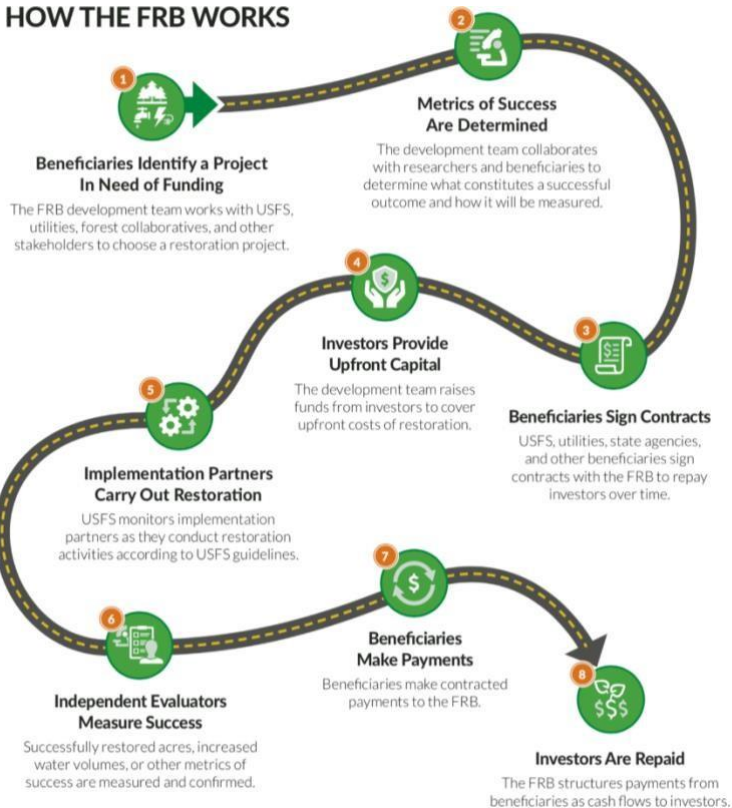
	Ecosystem Type	Valuation Benchmark	Type of Benefit	Example
Water Impact	Water quantity	Utility replacement cost	Revenue enhancing	Cost per acre-foot of reclaimed water
	Added hydropower	Megawatt hour spot market	Revenue enhancing	Average spot price per megawatt hour
	Water quality	Increased cost of treatment	Avoided cost	Cost of chemical and increased filter backwashing
	Sedimentation	Cost of dredging	Avoided cost	Denver Water post-fire restoration costs (>\$30 million to date)
	Flood control	Cost of flooding	Avoided cost	Cost of flooding damage following Schultz Fire in AZ
Fire Impact	Forest resilience	Fire suppression cost and value of fire risk reduction to infrastructure	Avoided cost	Cost of electrical transmission lines for Rim Fire, average cost of fire suppression per acre, or reduction of insurance premiums
	Carbon emissions	Carbon market	Revenue enhancing	Voluntary carbon permit price
	Wildlife habitat	Mitigation credits	Revenue enhancing	Value of mitigation banking market
	Forest health	Cost of tree mortality	Avoided cost	Value of carbon and fire risk reduction
Social Impact	Job creation	Restoration jobs	Revenue enhancing	Salaries and taxes generated by restoration crews
	Recreation	Tourism value	Protected revenue	Community-specific tourism revenue
	Protected timber	Value of timber	Avoided cost	Merchantable timber appraisal and expected harvest schedule

*Figure 1. Blue Forest Conservation & Encourage Capital, 201*

### iii. The business model

#### Overview

##### HOW THE FRB WORKS



The FRB accelerates the pace and scale at which restoration activities can be undertaken by raising private capital to fund the full cost of restoration upfront. Then, a range of stakeholders that benefit from project outcomes like reduced fire risk and improved water quality share the cost of reimbursing those investors over time at a modest rate of return. Depending on the FRB project, these stakeholders – or beneficiaries – could include federal and state land management agencies, water and electric utilities, water-dependent companies, and private landowners, among others.

Beneficiaries could make contracted payments of two varieties: fixed cost-share payments, or pay-for-success payments that reimburse investors at different rates based on project outcomes.

**In either case, contracting with beneficiaries converts restoration benefits into cash flows for investors.**

Figure 2. Blue Forest Conservation & Encourage Capital, 2017

As the FRB is

As the FRB is piloted in different contexts with different beneficiaries, a variety of contract types will be considered.

What differentiates the FRB from other approaches is not only its use of investor capital to fund restoration quickly and at scale, but the collaborative model of cost sharing among beneficiaries. This approach engages a range of stakeholders to split the cost of repaying investors, and involves them in project development. As such, the FRB model encourages a collaborative systems-level response to forest health challenges that makes use of funds, experience, and expertise from a range of public and private players.

### Organization and governance

In any multi-stakeholder engagement, strong governance processes and procedures are essential to ensure that incentives are properly aligned, environmental goals are not compromised, conflicts of interest are avoided, and transparency is prioritized. As the project developer, BFC works to identify stakeholders' needs and desires through a transparent process that builds strong, collaborative relationships. For each project BFC sets up a special purpose vehicle (SPV). Investors, beneficiaries, and the project implementer all sign contracts with the SPV, not BFC or each other. All funds go through the SPV.

To ensure that conflicts of interest are avoided, BFC does not take commitments of investor capital until NEPA planning is complete, meaning that investor funds are not used to cover environmental planning costs or to influence the prescribed treatments in any way. In addition, to ensure that environmental objectives are not compromised during project implementation, BFC contracts a nonprofit implementation partner with local knowledge and restoration expertise to hire local crews to undertake restoration work. By using a third party, BFC creates a firewall to prevent stakeholders like utilities and investors from having any influence on the implementation of restoration treatments.

### Delivery capacity/relevant stakeholders

The FRB is a collective action platform that aims to engage the many stakeholders that are impacted by forest restoration. The work of the following stakeholders is critical in bringing FRB projects to fruition.

- **Developer.** The development team (i.e. Blue Forest Conservation and the World Resources Institute) is responsible for bringing the FRB from concept to market. The development team engages stakeholders and scientific partners, facilitates all beneficiary and implementation partner contracts, sets up the investment vehicle, engages investors, and potentially manages post-implementation efforts.
- **Implementation Partners.** The implementation partner serves as a project manager on specific restoration projects. The development team looks for non-profit implementation partners with significant experience working with USFS, other stakeholders, and surrounding community groups.
- **Payors/Beneficiaries.** The FRB requires payors to enter into contracts with a project-specific special purpose vehicle (SPV) for a predetermined output tied to a discrete project. By bringing in multiple public and private beneficiaries to serve as payors, the FRB shares restoration costs among several entities, creating a more attractive economic proposition for investors and beneficiaries alike.
- **Research partners.** Third- party evaluators are employed to verify ecosystem service benefits. These academic and subject matter experts will ensure successful completion of USFS-prescribed restoration.
- **Investors.** Investors sign contracts stating the amount of upfront capital they will provide to fund restoration activities, and the rates of return at which they will be repaid by beneficiaries over a set period.



*Figure 3. Blue Forest Conservation and Encourage Capital, 2017*

It should be noted that neither the development team nor investors will dictate the prescription of treatments and management of the land. Instead, the FRB will provide capital for projects that are already planned by USFS. The management actions proposed by USFS will in all cases have been subject to public review and prescribed by expert land managers and foresters. From a land management perspective, the FRB is a new source of capital to complete restoration work that otherwise might not receive funding.

**Products and services being sold**

The service being sold – forest restoration – refers to vegetation treatments that return health and resilience to the forest ecosystem. The term restoration can have many different meanings. In a broad sense, ecological restoration, which includes forest restoration, is defined by USFS as ‘restoring the functions and processes characteristic of healthier, more resistant, more resilient ecosystems, even if they are not exactly the same systems as before.’ It is important to note the last part of this USFS definition, which stipulates a potential change in the system. Restoration often modifies the characteristics of the land by planting native trees, removing trees to improve forest health, or creating better habitat for species and biodiversity. Examples of restoration projects include:

- Hazardous fuel treatments (e.g. removing excess vegetation)
- Reforestation (e.g. planting trees and other species after a sever fire)
- Invasive or native species control (e.g. managing a bark beetle infestation)
- Habitat enhancements (e.g. road maintenance to protect water quality for fish habitat)



The Forest Resilience Bond (FRB) finances restoration projects within forested watersheds, with a focus on hazardous fuel treatments that remove brush and shrubs and that thin trees to restore forests to a healthier and more natural state. Depending on the forest plan, projects may also include species control and habitat enhancements. The interventions financed by the FRB have a variety of positive conservation outcomes, including reduced fire risk, increased water quality and quantity, improved air quality and wildlife habitat. Forest restoration projects can also improve recreational opportunities and spark rural economic development.

The photos below provide an example of what an overgrown forest looks like compared to a forest that has undergone ecological restoration.



**Overgrown (Before)**

*Stanislaus-Tuolumne Experimental Forest*

Stanislaus National Forest September 2016



**Restored (After)**

*Glaze Forest Restoration Project*

Deschutes National Forest September 2016

*(Blue Forest Conservation & Encourage Capital, 2017)*

### Revenue Model

The FRB's revenue model is set up around contracted cash flows generated from beneficiary contracts that become cash flows to investors. Contracts can either be set up as fixed cost-share payments or pay-for-success payments that are linked to different rates of return depending on project outcomes. Depending on the beneficiaries in question, pay-for-success contracting may not be an available or desired option.

For the FRB's first pilot project in the Yuba River watershed, the development team raised financing from concessionary sources that can tolerate lower returns (through foundation program-related investments, or PRIs), as well as market-rate sources. The rate of return for foundation investors for the Yuba project is 1%, and for market-rate investors is 4% on drawn capital plus a 0.5% commitment fee. As the FRB model is replicated and scaled BFC's goal is to move towards a model reliant on solely market-rate capital.

Stakeholders that are potential payors in the FRB model benefit from restoration for the following different reasons.

- **US Forest Service.** USFS benefits from reduced risk of severe wildfire, and also from leveraging partner funds to reduce the costs of restoration. In addition, USFS develops relationships with important non-traditional partners that could help the agency to achieve landscape-scale resilience through future partnerships.
- **Water and electric utilities.** Utilities benefit from protected water quality, avoided sedimentation and debris, the potential for increased water quantity, and reduced fire risk to infrastructure.
- **State and local governments.** These stakeholders benefit from positive environmental and social outcomes including reduced fire risk, improved water and air quality, increased water quantity, and rural economic development.
- **Other groups.** Private landowners would enjoy many of the same benefits as USFS, and water-dependent companies would enjoy similar benefits as water utilities that could impact their bottom line. Insurance companies also represent potential stakeholders for future iterations of the FRB.

### Cash flows and commercial sustainability

The primary cash flow to the FRB will be annual payments from beneficiaries to investors, passed through the FRB special purpose vehicle. Contracted payments to investors will be made for up to 10 years. Sample cash flows can be found at: Blue Forest Conservation, and Encourage Capital. *Fighting Fire With Finance: A Roadmap for Collective Action*. Forest Resilience Bond, Sept. 2017, page 71. The FRB model of collaborative financing through contracted cash flows is replicable in other contexts where there is a pre-developed project and a range of beneficiaries that are willing and able to share the cost of repaying investors.

### External dependencies

The FRB model relies on the development team's ability to find pre-designed and NEPA-approved restoration projects, beneficiaries that are willing and able to repay investors, and an implementation partner familiar with USFS that has the expertise and capacity to oversee all work on the ground.



<b>Risk management</b>	
<b>DEVELOPMENT RISKS</b>	<b>MITIGATION STRATEGY</b>
<p><b>ABSENCE OF ACCEPTABLE CONTRACTS:</b> Contracts must be acceptable to all investors and payors as well as be permissible under the legal authorities granted to the USFS.</p>	<p>With the support of two experienced law firms and input from stakeholders, the development team has already made progress developing contracts that meet statutory requirements for government agencies while also appealing to investors and other stakeholders.</p>
<p><b>UNDERDEVELOPED ECOSYSTEM SERVICES MEASUREMENT:</b> Methods to measure the positive environmental impact associated with forest restoration, although validated through peer-reviewed science publications, must be understandable and acceptable to stakeholders where measurement of benefits triggers payment.</p>	<p>The development team has already engaged leading hydrologists conducting relevant research to codify measurement methods and has begun sharing them with key stakeholders. These methods will also be tested in pilot transactions with opportunities for further adjustment before large-scale projects begin.</p>
<p><b>BENEFITS DO NOT MATERIALIZE AS EXPECTED:</b> The benefits of forest restoration are anticipated based on scientific research, but differences in climate and landscape could conceivably alter the actual results.</p>	<p>Small-scale pilot projects will test to confirm whether benefits are accruing as expected. If not, FRB research partners will determine the underlying cause or causes, which will help scientists develop a future course of action that may include modifying the measurement approach, the target landscapes, and/or beneficiary expectations of the potential downstream benefits.</p>
<p><b>LIMITED RESOURCES AVAILABLE FOR PLANNING AND CONTRACTING:</b> A clear pathway for future FRB transactions requires projects that are planned according to the National Environmental Policy Act (NEPA), which takes time and money. USFS has limited resources to conduct the planning required and also to contract the implementation of the restoration work.</p>	<p>The development team will initially focus on NEPA-ready land and will work closely with USFS to build a pipeline of shovel-ready restoration projects. The development team is exploring the opportunity to create a fund that provides financial resources for planning and the role of the implementation partner can alleviate some of the planning and contracting strains.</p>
<p><b>DISPUTED WATER RIGHTS:</b> Assuming forest restoration generates additional water supply, the ownership of such quantity gains could be disputed due to complicated water rights laws.</p>	<p>The development team has enlisted lawyers to advise on water rights considerations for each transaction. Examples of mitigation opportunities include working with senior and/or non-consumptive right holders and contracting based on environmental proxies for water volumes that do not conflict with water rights law.</p>

<p><b>INVESTOR UNFAMILIARITY:</b> Many investors are inherently skeptical of an innovative investment with limited track record such as the FRB.</p>	<p>The development team includes Encourage Capital, a leading impact investing firm with an established track record. Small pilot projects financed through concessionary investments can provide the track record for future institutional investment.</p>
<p><b>POTENTIAL LACK OF RESTORATION CREWS:</b> Given the limited scale of restoration to date, some regions face a lack of trained restoration crews. The size and scope of FRB projects may outpace the availability of locally-sourced, skilled restoration crews with the proper equipment.</p>	<p>FRB transactions will start small with pilot projects and will increase in size only once appropriate restoration capabilities have been secured. The pipeline of FRB projects will create a steady demand for restoration crews, which should help attract new entrants and allow the market for trained crews to grow with the FRB. The development team is also exploring the opportunity to finance restoration equipment, which would remove a financial barrier for crews entering the market.</p>
<p><b>THREAT OF LITIGATION:</b> Projects that are not already NEPA-ready will require environmental assessments and permits to conduct the forest restoration treatments. Litigation from community and environmental groups could threaten the ability to obtain the necessary authority.</p>	<p>The development team will proactively collaborate with communities and groups impacted by restoration work in a given area to ensure any concerns are properly addressed. Activities that are likely to attract litigation, such as conducting prescribed burns or treating areas that contain threatened or endangered species, will be closely studied and evaluated.</p>
<p><b>ABSENCE OF SUFFICIENT BIOMASS AND WOOD PRODUCT HANDLING INFRASTRUCTURE:</b> With the closing of many mills and persistent decline of the forest products industry, much of the biomass processing infrastructure in the U.S. has disappeared as well. The development team will need to create a plan for the vegetation removed from the forest during restoration projects.</p>	<p>The development team will collaborate with initiatives to support existing biomass facilities and pursue new technologies, such as the mobile gasification units of All Power Labs to convert biomass to biochar, electricity, and higher value wood products. The development team may also pursue complementary funding for biomass infrastructure with future development.</p>

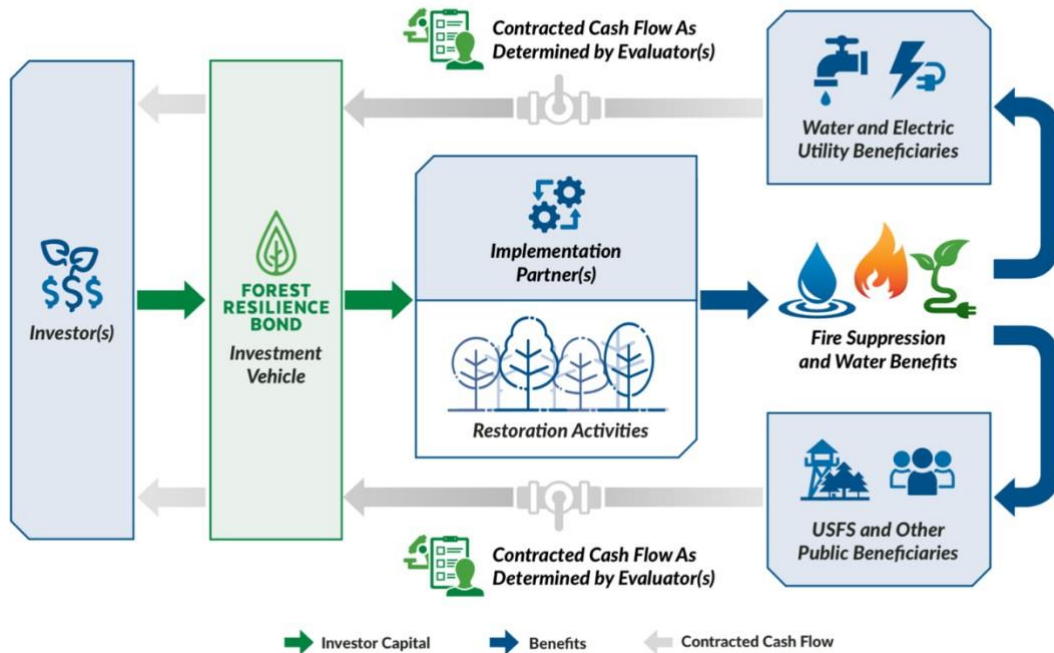
<b>INVESTOR RISKS</b>	<b>MITIGATION STRATEGY</b>
<p><b>CREDIT/COUNTERPARTY RISK:</b> Counterparties, such as USFS and utilities, might not make scheduled payments on time and in full.</p>	<p>Counterparties are of the highest credit quality and cash flows will be legally contracted. Investors will be properly compensated for the amount of risk associated with the FRB.</p>
<p><b>POLITICAL APPROPRIATIONS RISK:</b> As a federal agency, USFS receives its budget every year as appropriated by Congress. If a given FRB transaction contracts for funds dependent on future budget appropriations, payments could face political risk.</p>	<p>Multi-year appropriations risk is unavoidable in many business relationships between private companies and the federal government (e.g., Boeing contracts with the Department of Defense), yet many of these sizable transactions have been successful for decades. To address this risk, the development team will work with USFS on flexible reimbursement methods such as the ability to prepay, obligating trust funds, termination for convenience clauses, and/or revisions to the upcoming Farm Bill.</p>
<p><b>LIQUIDITY RISK:</b> The FRB is a bespoke investment that may span up to 10 years. Given the absence of a secondary market, liquidity would be limited.</p>	<p>The development team will be fully transparent with investors and intends to pursue only long-term investors for whom the structure is aligned with their investment thesis.</p>
<p><b>EXECUTION RISK:</b> The actual execution of the FRB will require many different groups to work together in new ways, which could pose a risk for investors.</p>	<p>Investor capital will not be drawn until all parts of the transaction, particularly the implementation of restoration treatments, are approved and ready to move forward. Intermediate implementation targets, such as an average cost per acre restored, would need to be met before drawing additional investor capital to pay implementation partners. Thoughtful contracts with established counterparties and strong governance protections will ensure that funds are spent efficiently and monitored closely.</p>

*iv. The investment model*

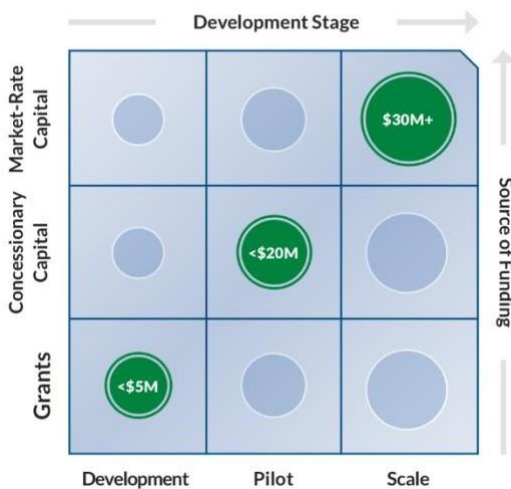
**The financial instruments being sought to fund the business model**

The schematic below shows the FRB structure. All contracted funds pass through the investment vehicle, a project-specific special purpose vehicle (SPV) set up by BFC, which provides more flexibility for deployment of funds.

## STRUCTURE OF THE FOREST RESILIENCE BOND



## INVESTOR MATRIX



*Figures 4 and 5. (Blue Forest Conservation and Encourage Capital, 2017)*

### Types of capital and investors

While the ultimate goal of the FRB is to scale investment in forest health using market-rate capital, it is unrealistic to expect that no other capital sources will play a role. The market for the FRB will evolve with various sources of capital playing pivotal roles along the way.

Patient capital (usually in the form of foundation and public sector grants) is crucial in the early stages of exploration and stakeholder engagement. During the pilot phase, a blended structure of concessionary capital – such as program-related investments and loan guarantees – and market rate capital is used.

Once blended capital has advanced the R&D to an initial transaction and blended capital has financed the demonstration, market-rate capital can finance all or part of the project costs as the FRB scales. Pursuing market-rate capital any sooner would likely be premature as the risk/reward profile would not yet be appropriate for such investors, especially without a history of past performance. While the specifics of each project will vary, identifying and securing the right capital at the right time is imperative to successful project financing.

Investors targeted by the projects include family offices, pension funds, endowments, insurance companies, impact investors and others.

### **The relative size of these instruments and basic information on their terms**

The first FRB pilot project raised \$4 million for a \$4.6 million restoration project on the Tahoe National Forest. Investors in this pilot include two foundations making program related investments (PRIs) with the expectation of a 1% rate of return and two market-rate investors with a 4% rate of return.

However, small one-off restoration projects do not address the millions of acres at risk, nor do they warrant the time and costs of due diligence for institutional investors. Given the multi-billion dollar need for forest restoration across the US, the FRB presents an unparalleled opportunity for investors seeking stable returns and environmental impact and for USFS, state governments, and large utilities to sustainably fund restoration at scale.

Moving from pilot to scale will allow the development team to shift focus from philanthropic and public sources to institutional investors. With the expectation that transactions will be financed on a project-by-project basis, expected deal size could range from approximately \$15 million to \$50 million and involve a limited number of market-rate investors. Institutional fundraising will focus on asset managers such as pensions, endowments, insurance companies, and in some cases, banks. Many of these asset managers are subject not only to a fiduciary duty of maximizing returns for pensioners and other investors but also requirements to invest in projects that support environmental health, local communities, or both.

By extending payments over five to ten years, the FRB accelerates restoration work without stressing budgets in any one year. The reimbursement period of up to ten years also more closely matches the timing of benefits, as is the case for increases in water quantity that are expected to last between eight and 12 years. The use of pay-for-success contracts could further help beneficiaries such as utilities by enabling them to only pay for benefits received.

### **Risk mitigation instruments used and how these were incorporated into the investment structure**

Please refer to the “Risk Management” section on page 8 above.

### **The exit strategy employed**

Investors receive interest and principal throughout the life of the loan, effectively using the contracted cash flows to amortize the loans. Beneficiaries will continue to reap the conservation benefits of restoration work after investors exit. If there is a wildfire at the project location that inhibits all future work, investors will be repaid the principal of their investment.

### **Innovative features of the investment model**

What differentiates the FRB from other approaches to forest restoration is not only the use of investor capital to finance treatments but also the innovative cost sharing among beneficiaries. By bringing together multiple payors to share the financial burden of forest restoration, the FRB creates compelling economics for beneficiaries while diversifying cash flows and providing a return for investors. Additionally, using investor capital can shift the initial funding responsibility from USFS to private investors, relieving strain on near-term USFS appropriations. Lastly, this is the first model to allow private investors to earn a return while supporting public land management.



### **Replicability and Scalability**

Through an extensive analysis, the BFC team has determined that nearly 8 million acres of forest land managed by USFS are accessible and high priority for restoration, implying an \$8 billion total addressable market (assuming an average cost of \$1,000/acre). Given this vast need, the team has set a target of deploying a cumulative **\$1 billion in private investment** through the FRB over the next decade. To reach this goal, the team must develop a pipeline of market-ready investments in forest restoration as well as match such investments with the appropriate types of capital.

Given the large scale of ecological need as well as the size of investment that institutional investors are seeking, BFC plans to scale the FRB to fund projects in the \$15 - \$50 million range as well as aggregate smaller planned projects into a fund structure. The fund would function similar to a community loan fund where the assets include the various project-level special purpose vehicles (SPVs). By aggregating projects into a fund structure already familiar to many investors, the BFC platform would benefit from a standardization of projects and a streamlined due diligence process in which the team could allocate capital more quickly while also engaging investors on a larger scale than could be offered by any one specific project. Working at this scale will also allow access to larger institutional investors such as pension plans, endowments, and insurance companies that require a certain scale to invest. In addition to opening doors to new investors, larger projects will fund more acres of restoration, reduce transaction costs, and better justify the time and cost associated with investors' due diligence. BFC envisions future larger projects as fully market-rate transactions that mirror infrastructure project financing.

The FRB is replicable in locations where there is a need for upfront financing to fund an ecological intervention, and there are beneficiaries willing and able to share the cost of reimbursing investors over time. The complexities of replication include identifying project sites, beneficiaries/payors, and investors, and setting up contracts with those entities. Looking ahead, BFC is exploring other landscapes in which the FRB could meet conservation needs, and considering how the model could be adapted to best serve these needs. While the current focus of the FRB is fuels reduction work on National Forest System land, the development team is exploring applications in other contexts such as riparian restoration, aquatic organism passage, rangelands, and private lands.

### **Acknowledgements**

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