



# Financing resilient communities and coastlines

“Environmental impact bonds foster public-private partnerships that wed financial returns with the environmental and social impacts of projects that benefit Louisiana’s future.”

—Robin Barnes, Executive Vice President and COO, Greater New Orleans, Inc.

## HOW ENVIRONMENTAL IMPACT BONDS CAN ACCELERATE WETLAND RESTORATION IN LOUISIANA AND BEYOND

Louisiana is facing a land loss crisis. Every 100 minutes, an area of land the size of a football field turns into open water. Since the 1930s, Louisiana has lost nearly 2,000 square miles of land, and the state will lose another 4,000 square miles over the next 50 years if nothing is done to restore and protect the coast.

A new report by Environmental Defense Fund (EDF) and Quantified Ventures finds that environmental impact bonds (EIBs) could help Louisiana restore its rapidly disappearing coast faster and for less money, while involving local asset owners, such as landowners and businesses, in voluntarily helping pay for projects that realize superior reduction in land loss.

The feasibility analysis outlines next steps the state would need to take to design and implement the first ever environmental impact bond for wetland restoration. In addition to cost-savings and land-building benefits, EIBs would also provide Louisiana the opportunity to be a leader in coastal resilience financing by developing innovative public-private partnerships.

### What is an environmental impact bond?

An EIB is a form of pay-for-success debt financing in which investors purchase a bond and repayment to investors is linked to the achievement of a desired environmental outcome. An EIB can be designed to help the state attract financial support from parties that directly benefit from earlier coastal restoration.

In this conceptual EIB design, a performance payment would be provided if, at the end of the bond period, the wetland achieves a pre-established mutually-defined outcome, such as avoided land loss. Both investors and contractors share that performance payment, which is provided by local asset owners that would receive direct benefits (i.e., avoided costs

## FINANCING RESILIENT COMMUNITIES AND COASTLINES

from reduced storm damages) from earlier, high-quality restoration. The bond would be repaid through future Deepwater Horizon oil spill settlement revenues.

EIBs would allow the state of Louisiana to:

- Use capital more efficiently by building wetland restoration projects sooner,
- Involve local asset owners who benefit from wetland restoration projects,
- Reward high-performing wetland projects and the contractors who build them,
- Build an evidence base for the value of wetlands for reducing land loss, and
- Expand the range of possible coastal restoration financing tools.

### What are the benefits of environmental impact bonds?

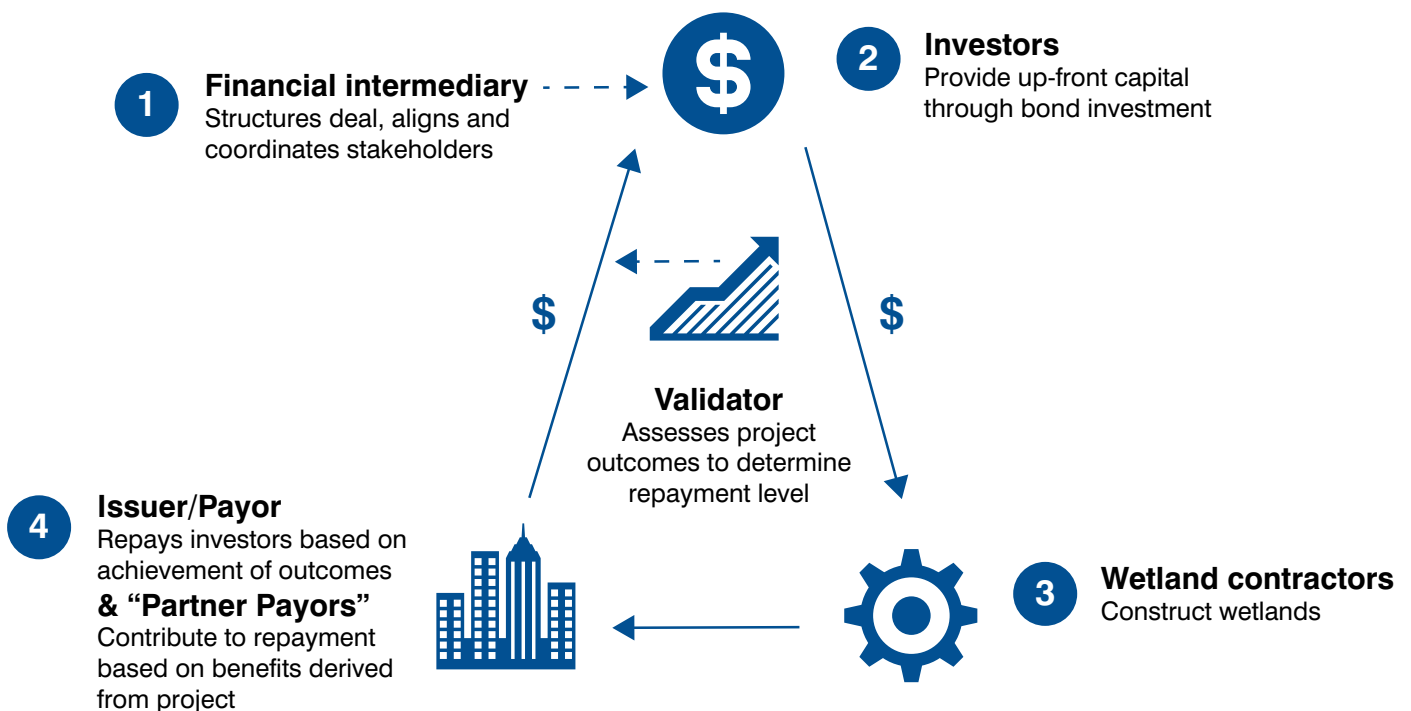
- **Align interests in coastal restoration and superior project performance:** By featuring a performance payment, based on evidence collected by an independent party, EIBs align the interests of the state, asset owners, contractors and investors to ensure wetland restoration results in desired outcomes. In this EIB design, the desired outcome is reduced flood risk as measured by reduced land loss.

- **Attractive to impact investors:** EIBs are designed to be attractive to private investors, particularly “impact investors,” who seek not just financial returns but also environmental and social returns. Investors interested in coastal restoration and/or making communities more resilient to rising seas and increased storms may be interested in investing in this kind of EIB.
- **Ability to measure wetland restoration benefits:** EIBs provide an important means for demonstrating the value of restored wetlands. By quantifying the impacts of investing in wetland restoration, the EIB helps establish to stakeholders the benefits derived from restoration projects.
- **Increased government effectiveness:** EIBs can help accelerate and magnify the state’s effectiveness and impact by restoring wetlands that contribute to protecting communities and stabilizing local economies, jumpstarting job creation through coastal restoration, and preserving tax bases.

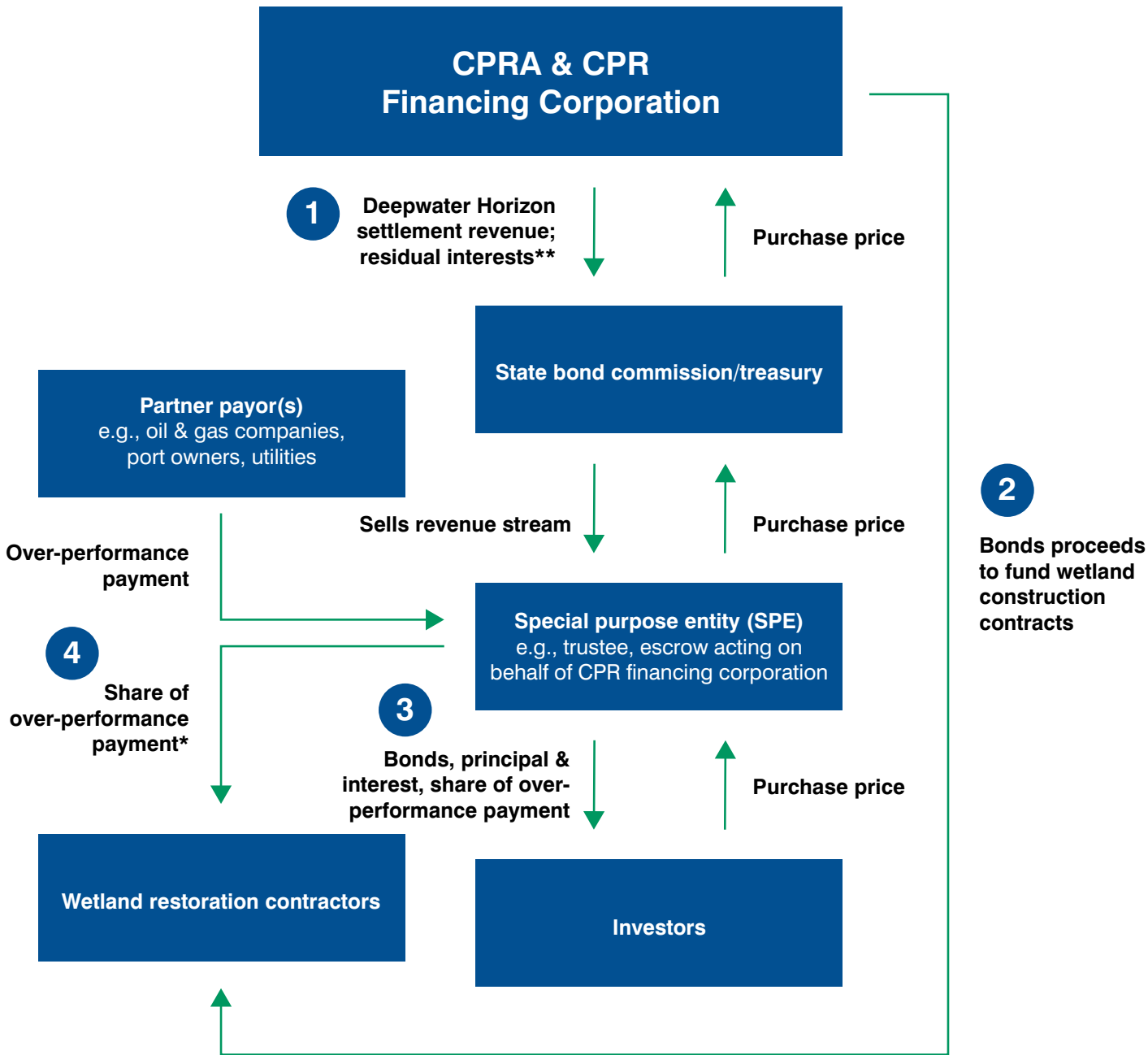
### Pilot environmental impact bond transaction for Louisiana wetland restoration

Louisiana has a vision for restoring and protecting its coast through its 50-year, \$50-billion Coastal Master Plan. While the plan is in place and some projects are underway or completed, Louisiana has identified only \$9.16 billion to \$11.76 billion of the funds needed to fully implement the plan. Failure to find the remaining capital will leave communities and assets increasingly vulnerable to sea level rise and damaging storms.

### Environmental impact bond structure overview



Proposed Louisiana environmental impact bond transaction structure



- 1 Bond issued, investors provide capital
- 2 Bond proceeds fund wetland contracts
- 3 Investors repaid principal & interest
- 4 Performance payment distributed if triggered

In this study, EDF and Quantified Ventures designed a conceptual EIB transaction for a \$40-million investment in a portion of the Belle Pass–Golden Meadow Marsh Creation project adjacent to Port Fourchon. This site was selected due to the port’s key role in facilitating offshore oil and gas production, making it an ideal location for piloting the EIB and its multi-payor transaction concept.

The report outlines the major next steps Louisiana’s Coastal Protection and Restoration Authority and Coastal Protection and Restoration Financing Corporation would need to take to pilot an EIB by using the Financing Corporation’s bonding authority. Such steps include resolving any restrictions on use of oil spill settlement funds, determining the bond’s tax-exempt status, and securing a financial intermediary and willing partner-payors.

### Implications beyond Louisiana

By demonstrating how the private sector can partner with government to implement coastal restoration projects, while generating a financial return for investors, Louisiana

can be a leader in using private investment for coastal resilience. EIBs can be scaled and replicated to support coastal restoration throughout Louisiana, the Gulf Coast and beyond to help areas coping with sea level rise, land loss and damaging storms.

### About the study

Environmental Defense Fund, a leading international nonprofit organization, creates transformational solutions to the most serious environmental problems. EDF links science, economics, law and innovative private-sector partnerships.

Quantified Ventures, an impact investment intermediary firm that helps coordinate outcomes-based financing approaches, played a key role in coordinating the first-ever DC Water EIB in 2016 for green infrastructure investment.

The study was funded by NatureVest, the conservation investing unit of The Nature Conservancy, through its Conservation Investment Accelerator Grant, which aims to find and support the best talent and most meaningful work in the field of conservation investment.

### Proposed EIB transaction details (to be finalized in transaction structuring process)

EIB structure	2-tiered (base and over-performance)
Transaction size	\$40 million
Denomination	\$5 million
Upside performance payment	\$3.5 million to \$8 million (\$1 million to contractors, remainder to investors)
Tenor	10–15 years
Interest rate	1.82–4.73%
Issuer	CPR Financing Corporation
Bond type	Asset-backed bond against future Deepwater Horizon spill settlement revenues
Bond tax status	To be determined
Potential repayment sources-principal	Deepwater Horizon oil spill revenues (CPRA)
Potential repayment source-interest	Coastal Protection and Restoration Trust Fund (CPRA)
Potential performance payment source	Local private asset owner (e.g., oil and gas company)
Project location	Belle Pass–Golden Meadow Marsh Creation, west of Port Fourchon
Acres of wetland restored	585–835 acres
Performance outcome of interest	Flood risk reduction
Proxy performance metric for measurement	Avoided land loss (vs. expected land loss, and against a similar site where restoration has not occurred)

For more information, please contact Shannon Cunniff, Director of Coastal Resilience, 202 572 3321, [scunniff@edf.org](mailto:scunniff@edf.org) or Elizabeth Skree, Communications Manager, 202 572 3382, [eskree@edf.org](mailto:eskree@edf.org)