AGENDA

1. Background

2. Research approach

3. Types of strategies

4. Questions

1. Background

Setting the stage

- Recognize, understand and appreciate the power of water

- Value water, ensure its quality and measure its extraction and use

- Create the capacity to raise, receive and manage money

FLOOD READY = FUND READY

MARCH 2015 FLOOD IN ALEXANDRIA

The Louisiana Water Economy Mindset

- Recognize that water is our future—for better and worse

- Acknowledge and respect the role water plays in the economic, environmental and social well-being of Louisiana

- Create new economic and recreational opportunities in the water management sector

SOURCE: LOUISIANA WATER ECONOMY NETWORK

2: Research approach

Methodology and approach

KEY QUESTIONS TO CONSIDER

- What is the genesis of a given funding source?

- What is the key legislation at play?

- What are the characteristics of the funding source?

- What is the frequency of the funding source and is it sustainable in the long term?

- Do fees or taxes require authorization and/or regular reauthorization by legislative bodies or popular vote?

- Is there an effective website and/or funding guide or portal?

- Is the funding source applicable to Louisiana? If so, how?

3. Types of strategies

User fees and potential revenue

- Most water is withdrawn at no cost.

- User fees have the potential to generate between $30 million and $60 million in annual revenue.

WITHDRAWAL SECTOR	DAILY USE IN MILLIONS OF GALLONS PER DAY	ANNUAL USE IN MILLIONS OF GALLONS	POTENTIAL REVENUE FROM A $10 ANNUAL USE FEE
Public, rural domestic	754	275,210	$2.75 million
Agriculture, livestock and aquaculture	1,546	564,290	$5.64 million
Industrial, power generation	6,420	23,430,300	$23.43 million

SOURCES: LOUISANA DEPARTMENT OF TRANSPORTATION, 2015 AND LOUISIANA LEGISLATIVE AUDITOR, 2020

Stormwater utilities

NASHVILLE, TN (POPULATION OF 6.8 MILLION)

- Instituted a stormwater fee in 2017 in response to major flood in 2010
- Collects $6 per month for a typical residential property
- Generates $34 million annually

NASHVILLE, NC (POPULATION OF 5,500)

- Collects $2.50 per month or $30 annually for a typical per residential property
- Collects $30 annually per 2,500 square feet of non-residential impervious surface
- Generates $140,000 annually to support a new stormwater division

CLOGGED STORMWATER DRAIN
SOURCE: STEPHEN C. PICOU

Infrastructure bank

RHODE ISLAND (POPULATION OF ONE MILLION)

- Rhode Island Infrastructure Bank supports and finances infrastructure improvements including water and wastewater, road and bridge, energy efficiency, renewable energy and brownfield remediation.

- The Stormwater Project Accelerator provides up-front capital for stormwater infrastructure projects.

- The Municipal Resilience Program helps towns and cities identify and fund climate change-related priorities.

CREATED AND SUPPORTED OVER 62,000 JOBS AND PROVIDED MORE THAN $2.2 BILLION IN FINANCING

SOURCE: RHODE ISLAND INFRASTRUCTURE BANK

Green and environmental impact bonds

MASSACHUSETTS (POPULATION OF 6.9 MILLION)

- In 2018, the state passed a $2.4 billion environmental bond bill to fund a comprehensive approach to climate adaptation.

- The legislation funds the Municipal Vulnerability Preparedness Program, which requires local governments to participate in training to develop integrated hazard mitigation plans that align language, data and goals throughout the state.

LOUISIANA (POPULATION OF 4.6 MILLION)

- In 2018, the Louisiana Community Development Authority assisted in issuing the state's first green bonds using Gulf of Mexico Energy Security Act funds.

- $12 million in revenue will be dedicated for environmental infrastructure work.

Carbon market systems

VIRGINIA (POPULATION OF 8.5 MILLION)

- In 2020, the state joined the multi-state Regional Greenhouse Gas Initiative.

- First-year revenues are projected to be $50 million to $100 million with 45% of proceeds to fund flood, sea-level rise and severe weather event costs.

- The state ranks 17th nationally for annual greenhouse gas emissions of 98 million metric tons.

NOTE: Louisiana ranks fourth nationally for annual greenhouse gas emissions of 226 MMT. (Source: EIA)

"Localities shall use moneys from the Fund primarily for the purpose of implementing flood prevention and protection projects and studies in areas that are subject to recurrent flooding as confirmed by locality-certified floodplain manager." — vafloods.org

Property and sales taxes

BAYOU VERMILION DISTRICT

- Voters renewed a millage in 2017, generating $2.1 million in 2019.

- BVD will use revenue to manage and maintain water quality and offer public outreach and education.

- Funds will supplement tax revenue with tourism revenue and leverage educational outreach to build awareness and support for water quality improvement projects, economic development and watershed management.

- BVD will use funds to build the Louisiana Environmental Laboratory Accreditation-certified water quality lab and education center.

SOURCE: BAYOUVERMILIONDISTRICT.ORG

Community-based public-private partnerships

- Milwaukee Metropolitan Sewerage District contracted with Corvias, a private company, to design and install green infrastructure stormwater capture projects.

- Corvias financed the projects. MMSD pays Corvias based on the number of gallons captured in a performance-based contract.

- The partnership accelerates implementation beyond standard publicly-funded processes.

SOURCE: MMSD.COM

Mitigation banks and land trusts

CANE BAYOU MITIGATION BANK, ST. TAMMANY PARISH

- St. Tammany Parish's market-based initiative leverages mitigation credits purchased at a lower price and uses funds generated from selling at a higher price.

- Initiative will restore and protect 1,169 acres near the headwaters of Cane Bayou and help offset nearby development impacts.

LAND TRUST FOR LOUISIANA

- Management of 20 projects conserving 7,000 acres

CANE BAYOU, ST. TAMMANY PARISH

Brownfield program

MINNESOTA (POPULATION OF 5.6 MILLION)

- Minnesota's Stormwater Park and Learning Center removed 16,330 metric tons of contaminated soil.

- The project restored a riverbank that connects to a new public access point.

- The initiative won a Brownfield ReScape Award in 2019.

SOURCE:MISSISSIPPI WATERSHED MANAGEMENT ORGANIZATION

Transportation funding for stormwater co-benefits

GREATER MEMPHIS (POPULATION OF 1.3 MILLION)

- Mid-South Regional Greenprint combined multiple funding sources – federal, state and local – to leverage transportation and street design funding that holistically addresses flooding, green space and recreation.

- The project encompasses parts of three states.

FLOOD MITIGATION PROJECT IN ST. BERNARD PARISH

Nonprofit coordination of water management interests on a state and local level

NEW JERSEY (POPULATION OF 8.9 MILLION)

- In 2019, the state authorized counties and municipalities to establish stormwater utilities.

- New Jersey Future partnered with Flood Defense New Jersey to establish the New Jersey Stormwater Utility Resource Center.

MILWAUKEE, WI (POPULATION OF 587,000)

- The Global Water Center is the world headquarters of The Water Council.

- It is recognized as a global leader in nurturing water technology innovation, business development and international relations.

Hazard-resistant building and development codes

- Protect people and investments

- Tailored to address local and regional natural hazards

- Reduce loss of life, property and tax base

- Strengthen community resilience and expedite recovery

- Use a combination of penalties and incentives

- Appreciate in value when designed as hazard-resilient

"Disaster resistant buildings that meet the 2018 International Residential Code and 2018 International Building Code led to a national benefit of $11 for every $1 invested in comparison to older generations of code"
– FEMA

Natural capital: assets that grow

- Focus on nature-based solutions and green infrastructure

- Use strategies outlined in resources such as the 2020 FEMA report, *Building Community Resilience with Nature-Based Solutions*

- Use new cost-benefit analysis tools that measure the value of natural features and assets and are available to planners

Be found and be funded

Common language

- Use widely adopted language for describing disasters, response and recovery, restoration projects and climate change adaptation plans.

Systems thinking

- Align with key terms, data and metrics that can help connect projects and needs to global support systems and philanthropy.

- Algorithms driving machine learning systems increasingly guide funding decisions.

New tools

- Adopt new metrics for cost-benefit accounting that encompass a broad range of natural, social and economic factors.

- "Harmonize" applications by using new tools to help planners meet modern criteria.

The circular economy

"A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use and regenerating natural systems."

– Ellen MacArthur Foundation

- Systemic approach to economic development

- Moves away from linear "take-make-waste" economic model to one that operates more like nature

- Provides opportunities for a sustainable economy less dependent on destructive practices and built upon activities that restore and regenerate natural capital

- Starts with a focus on eliminating waste and toxicity

- Exemplified by the water cycle as one of nature's circular systems

Strategies for Funding Watershed Management and Flood Risk Reduction in Louisiana

- Outlays best practices for long term funding inevitably require multiple sources, public support and a mix of mechanisms and organizations to receive and manage funds

- Provides additional information, including more than 140 links to specific programs, strategies and resources and suggested reading, as well as a table highlighting 13 localities
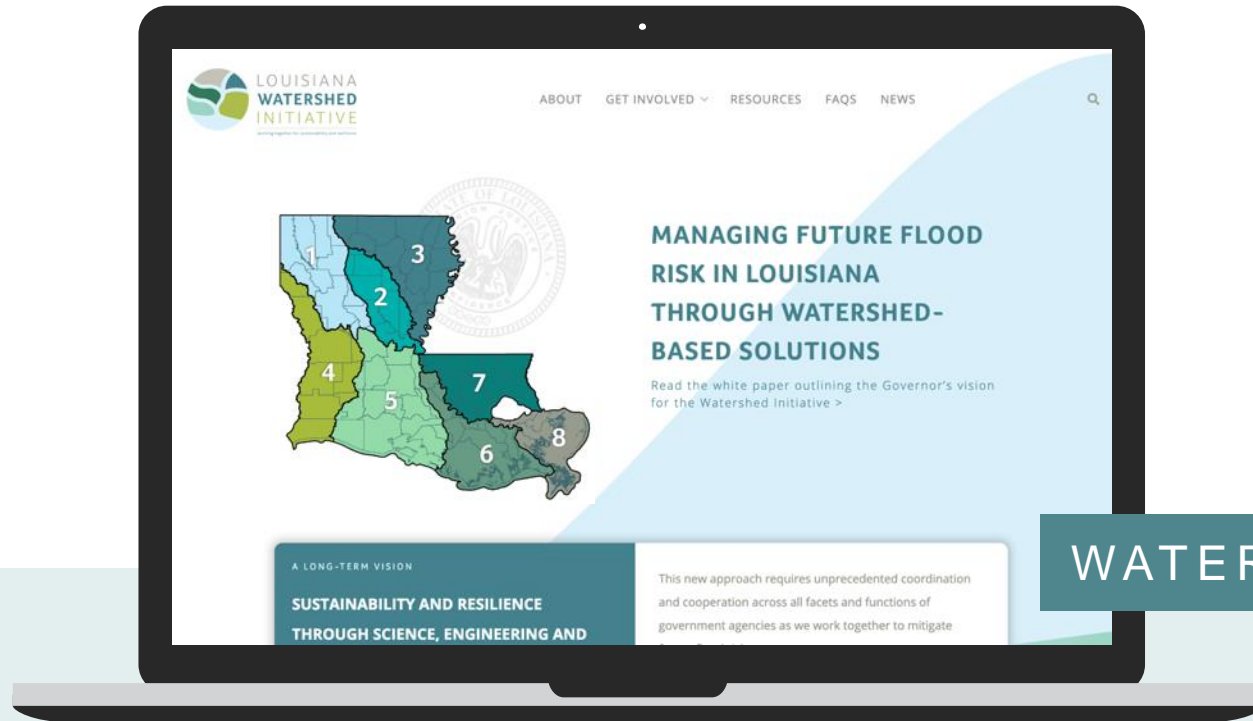
4. Questions