



Wetlands Conservation Finance: *Texas Style*

Workshop Summary and Next Steps

Objectives

Explore

Explore ways to generate a return on investment from wetland preservation and restoration projects for diverse stakeholders

Strategize

Investigate strategies and techniques to quantify social, environmental, and financial benefits of restoration

Collaborate

Identify partnerships and opportunities to advance wetlands conservation finance in Texas

The Wetland Conservation Finance - Texas Style Workshop was hosted by the Mission-Aransas National Estuarine Research Reserve (the Reserve), the Harte Research Institute for Gulf of Mexico Studies (HRI), and Seagrass Consulting LLC. As part of the theme of bringing wetlands to market, the workshop explored novel methods of finance, return on investment, and strategies and partnerships. The workshop was a kickoff where the organizers act as catalysts to move initiatives forward, connect partners, build tools, and assemble information, with an overarching goal to restore and conserve coastal wetlands. Based on survey results from the workshop, it is clear that participants want further investigation and communication on wetland conservation finance. The sponsoring organizations are committed to making that happen (see Next Steps below).

The workshop convened to investigate how wetland preservation, enhancement, restoration, or creation can benefit stakeholders through quantifiable social, environmental and financial results. At the outset, short presentations were given on the following topics to foster common understanding and spur discussion: current ecosystem service markets (such as carbon and the standards



required to participate in that market), wetland mitigation and mitigation banking, land conservation in Texas, ecosystem service credit stacking, voluntary markets (including interest in emerging markets in Texas), resilience bonds, corporate social responsibility, and needs regarding tracking costs and benefits of restoration projects.

Participants then broke out into groups to discuss: I) Regulatory Markets; II) Voluntary Markets; III) Corporate Social Responsibility and Resilience Bonds; and IV) Tools for Decision-Making. Below is a summary of discussions, followed by a list of next steps.

I. Regulatory Markets and Credit Stacking



Obstacles and issues for this area include that: the price of carbon in exchanges is too low; the cost of wetland restoration is high; mitigation banks are profitable only within watersheds where significant development occurs; many South Texas coastal wetlands are in relatively pristine condition; getting uplift for mitigation banks is not possible; and there is not enough development in South Texas to justify mitigation bank investment. A list of questions that could help develop this area is in [Box I](#), followed by recommendations as well as ideas for potential exploration and projects.

Box I: Regulatory Markets Questions for Further Investigation

How do we create market clarity in mitigation banking through price discovery?

How do we create a forum for informed buyers?

Have mitigation banks been established for barrier islands, and if so, what insights can we gain for Texas?

Within the existing regulatory markets, is it possible to capture multiple revenue streams on the same parcel of land by stacking credits (See the Ohio River Basin Trading Program for an example)?

Is there a need for policy adjustments to support multiple revenue streams at state and/or federal levels?

Can a municipality start or share in proceeds from the creation of a mitigation bank (this has been done in Alaska)?

Are there simple modifications (acceptable to USACE) to regulations that encourage new actors and sellers to enter the market?

If new or altered policies for regulatory markets occur, how would existing banks be grandfathered in (i.e., would they be exempt or retain their acquired rights)?

Are there other ways to encourage the creation of more mitigation banks?

Recommendations

Regulatory Markets and Credit Stacking

USACE, Mitigation Banks and Partners (e.g., researchers)

- ✦ Identify ways to lessen the time required to receive approval to mitigate activities at a wetland bank as a private project. An estimate is about 225 days, but it can take much longer than that, especially if the banker is unfamiliar with the process.



- ✦ Reevaluate use of HUCs as the mitigation bank service area so there can be more flexibility in purchasing credits in adjacent watersheds¹. All agencies (not just USACE) should be consulted on pursuing a regional rather than HUC-only view.

- ✦ Develop a functional assessment methodology that is appropriate for south Texas.
- ✦ Consider loss of revenue in interstate commerce as part of ecosystem valuation.



- ✦ Reevaluate the practice of converting coastal prairie to wetlands for compensatory mitigation and designate coastal prairie as a special aquatic site. Studies should be done on the function/value provided by coastal prairies as compared to wetlands.

- ✦ Consider giving higher value to preservation projects in South Texas, given the lack of available uplift, issues finding in-kind/ onsite projects and the duration of time it takes for restored wetlands to start functioning like natural wetlands.
- ✦ When pursuing stacking, frame projects around water quality improvements and coastal resilience, which has been shown in other areas to increase stakeholder buy-in and potential funding sources.



- ✦ Engage in landowner education regarding requirements to participate in markets.

¹ See [Forth Worth district 50/50 rule](#) encouraging in-channel mitigation.

II. Voluntary Markets

Voluntary markets function outside of compliance markets and offer an opportunity for corporations, private individuals, or other entities to buy credits, such as carbon offset credits. Purchase of credits is voluntary.

A list of questions that could help develop this area is in [Box 2](#), followed by recommendations.

Box 2: Voluntary Markets Questions for Further Investigation

Is there too much supply vs. demand in the voluntary market?

Beyond carbon, what are we selling?

What are the transaction costs?

Do state sponsored incentives exist to offset initial costs (e.g., tax incentives)?

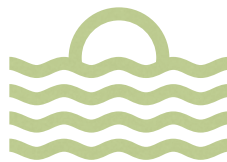
How can we verify the quality of the offsets, and long-term maintenance?

Can credits be allocated to multiple owners?

Recommendations

Voluntary Markets

- ◆ Investigate voluntary carbon markets that are available, pre-compliance, for landowners who desire a revenue stream by selling carbon offset credits, or for businesses, individuals that want to offset carbon.



- ◆ Consider the Environmental Defense Fund's Habitat Exchange, an offset which was established in partnership with the federal government as an alternative for corporations and developers that purchase endangered species habitat.
- ◆ Also consider the proposed Texas Coastal Exchange, which was set up to connect ranchers that can uplift wetlands and sell carbon offsets (the seller) to corporations or individuals (the buyer) that want to offset carbon.

III. Corporate Social Responsibility (CSR) and Resilience Bonds

Texas is home to many large corporations that have sustainability and social responsibility efforts because of institutional concern for the environment, the need to generate goodwill for neighbors, or because of shareholder pressure. Additionally, some businesses rely on natural systems for business operations. Further, innovative financial instruments like resilience bonds could be used to finance conservation of natural systems. These bonds are not yet common in the US, but some experts expect resilience bonds to be used in tandem with catastrophe bonds (CAT bonds). While CAT bonds are reactive and pay out after storms hit, resilience bonds are used to proactively build infrastructure including natural systems for storm damage mitigation.

An obstacle that was highlighted for CSR is obtaining access to corporate leaders with decision capability. On resilience bonds, an obstacle is that they are inherently local - each region or locality needs ecosystem service valuation, as easy-to-use standards are lacking. Also, the value of ecosystem services needs to be shared across all constituencies.

Box 3: CSR and Resilience Bonds Questions for Further Investigation

How can a marketing thrust be developed for wetlands mitigation finance in the Texas Coastal Bend?

How can we involve development and fundraising expertise, or even spearhead a conservation development office?

What local businesses might be interested?

Is there a celebrity advocate we could involve for this cause?

Can we identify and work with insiders from target industries while building opportunistic relationships?

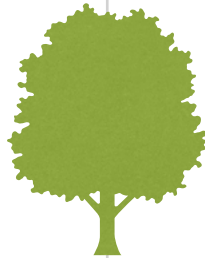
Recommendations

Corporate Social Responsibility



- ◆ Possible business partners that may have interests in coastal wetland restoration include ports, shoreline developers, refineries, manufacturing, chemicals/industrial, tech companies, airlines, hotels, or flood control/drainage districts.
- ◆ Identify the connection between business operations and wetlands (where possible), and approach operational decision-makers when making a pitch for funding wetland restoration and coastal resiliency.
- ◆ Cheniere is an example of a large corporation in the Coastal Bend who could be appealed to since the health of the ship channel (La Quinta and Corpus Christi) is critical for shipping liquefied natural gas. This ship channel is surrounded by coastal wetlands and quick storm recovery also means quick business recovery.
- ◆ Develop a relevant message on how these projects lead to increased revenue.

Resilience Bonds



- ◆ Find ways to broaden outreach and education, to provide a better understanding of how these bonds might work. Include contacts and timelines. Also provide understanding of bond agency rating services that set risk/interest rates.
- ◆ Conduct research on whether people in communities will buy into the concept of paying into/paying for ecosystem services.
- ◆ As municipalities will be the driver for these bonds, involve municipal planners in discussions, including by identifying projects that might be funded.
- ◆ Research levels needed for acceptable ecosystem service valuation analysis, such that bonds can be backed by objective science.
- ◆ Investigate transportation projects in Texas as a public/private partnership.

IV. Tools for Decision-Making

An idea for a conservation decision-making tool was introduced with a list of potential attributes. The tool is intended to help environmental managers select across various coastal infrastructure strategies, and especially natural infrastructure, by providing critical information (i.e. cost, schedule estimates, benefits provided) on past and current projects, to inform decisions on proposed projects.

An identified obstacle for this area is to avoid the comparison of ‘apples and oranges’ in any such database, especially considering that decision-making tools like cost benefit analysis require the standardization of measurements and values.

Box 4: Tools for Decision-Making

What type of data would such a tool rely on, i.e., would this be a synthesis of publicly available data (e.g., Census, impervious land cover, Texas Natural Resource Database/TNRIS, etc.)?

How will costs be broken out, given that a useful tool must separate the total cost to the municipality at the local level, not the amount of federal grants needed?

If the end result of this tool is a report, how will that be structured?

Will there be a need for education on using the tool?

How will operations and management costs be broken out for long-term maintenance of projects, given that projects are frequently approved in steps?

Recommendations

Tools for Decision-Making

- ◆ Getting data will be difficult, but for public projects would be possible.
- ◆ Review Louisiana’s Multi-Criteria Decision Analysis work (in USACE LA Coastal Protection and Restoration Technical Report).
- ◆ Define accuracy requirements - optimal use of tool might be for ballpark figures, or ranges that could be realized over time (5 to 10 to 15 years).
- ◆ A test case would be most useful to serve as a proof of concept, and whether such a tool could lead to behavior change. Should

start by choosing the three most common approaches and adding research on cost/benefits to a database.

- ✦ Could also narrow to one type of infrastructure, add a time component, and populate data out in GIS for a given area, rather than cost/acre for trees planted, etc. Every time a project is added to the database, there could then be an aggregation of dots/known sales in the region through time.
- ✦ Also need to pick and define green infrastructure concepts, and whether tool will focus on, e.g., shoreline revetment, stabilization, stream channels, etc., as well as the types of costs the tool will include, e.g., whether it will be broadened to encompass tax assessments or municipal bonds.
- ✦ Consider such a tool would be part data management and part art, trying to balance unknown costs of time, profit, O&M, overhead, etc.
- ✦ Ecosystem services also are difficult to quantify, and may change significantly depending on risk assessment, approaches, assessment, or building approaches.
- ✦ Also, even with detailed cost and benefit info., behavior change may not occur.

Individual Actions, Commitments and Next Steps

Finally, participants were asked to identify a specific action they will take in the near-term to advance the concepts herein. These actions are summarized, followed by next steps the workshop organizers will take to continue this work.

Individual Actions

Explore regional differences in stakeholder perceptions
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Reach out to non-traditional partners/stakeholders
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Call Katya and chat about database – does NOAA have anything to help?
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Discuss with Tierra Resources – other companies to approach as possible TCX buyers
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Pilot an ecosystem services workshop in TX region if possible, Gulf region for sure
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Develop sound mitigation projects to satisfy needed offsets in Coastal Bend market
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Continue discussing conservation finance, esp. related to tools in non-urban zones
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Propose to City of Houston they issue flood resiliency bond for green infrastructure
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Go after decision makers in local large corporations as partners – not as a CSR initiative but related to operation
.....

Meet with local industry/corp. to understand where coastal wetland benefits may fit into business operations models
.....

Brainstorm a list of potential businesses to partner on conservation projects and research how to frame the message to fit into their business model
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Have conversation with state regulators and climate registry about stacking nutrient and greenhouse gas credits
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Research Ohio River Basin Trading Program to learn more about their stacking water quality and greenhouse gas emissions credits
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Review geographic/ environmental TX databases for application to coastal projects
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Contact people in region (GLO, TPWD) about a creative way to get first bank started
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Find out what programs the COA has related to water quality/flow mitigation and how our LDC rewrites ties into them
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Attend USACE workshop on mitigation banks
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Next Steps

The organizers are committed to continuing this effort...

- ✦ Spring 2018: Holding a follow-up 'research' workshop to identify research questions and priorities on this topic sometime this Spring.
- ✦ Ongoing: Looking for funding opportunities to address research questions.
- ✦ Every 3-4 months: hosting a webinar and inviting all workshop participants, as well as others interested stakeholders, to continue to address topics listed herein.

