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Mitigation & Conservation Banking in the United States

An Emerging Biodiversity-based Asset Class

The United States has been a pioneer in the development of regulatory environmental markets for ecosystem services, particularly related to water and biodiversity. Regulated markets for the conservation of threatened species and the mitigation of wetland impacts, under the Endangered Species Act and the Clean Water Act, represent a growing biodiversity-based asset class with reported turnover in excess of US$1 billion per year. While these markets are generally regionalized or piecemeal, there remains a variety of significant investment opportunities

Under section 404 of the Clean Water Act and Sections 7 and 10 of the Endangered Species Act, anyone who destroys regulated wetlands, streams or endangered species habitat in the United States (US) must compensate for the destruction by: restoring other areas on the same site; paying in-lieu fees to a conservation organization; or buying credits from third parties who have already restored sites elsewhere in the same region. Recent regulations have created a regulatory preference for the last of these options, known as mitigation banking, because of the economies of scale and ecological benefits that can be achieved when large areas of habitat are restored in advance of impacts.

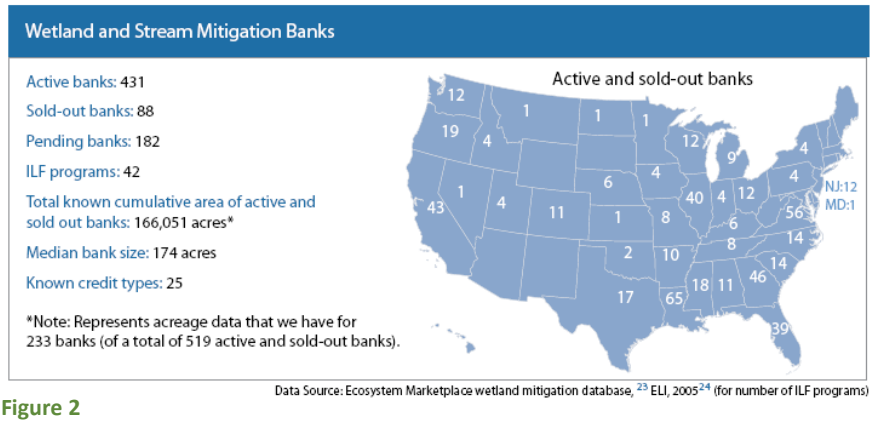
Wetland and stream mitigation banking is regulated at the federal level by the Army Corps of Engineers. Endangered species habitat banking (known as conservation banking) is regulated by the US Fish and Wildlife Service and the National Marine Fisheries Service. Wetland mitigation banking has existed in the United States since the early 1990s, and conservation banking was pioneered in California in 1997.

Currently, the Ecosystem Marketplace estimates there are 613 wetland and stream mitigation banks actively selling credits or pending approval to sell credits (431 and 182, respectively). Another 88 wetland mitigation banks have already sold out of credits. Conservative estimates put the annual transaction value of wetland and stream mitigation credits at US$1.3 billion. Conservation banking is a more concentrated industry – with 20 sold out banks, 77 active banks and another 20 banks pending approval. In total, the mitigation banking industry in the United States transacts more than US$1.5 billion per annum.[1] Figures 1 and 2 (next page) show the geographic distribution of mitigation banks across the US.

Mitigation credits are not a commodity good. They represent the environmental value of the restoration implemented for a specific ecosystem in a specific watershed. As methodologies to calculate this value and the type of ecosystem restored vary, mitigation credits are not fungible. Credits also vary widely in price depending on the economics of the service area in which they are produced and on the approach of regional regulators. Wetland credits, for instance, can sell for US$3000 in Arkansas and US$400,000 in California, where tidal and

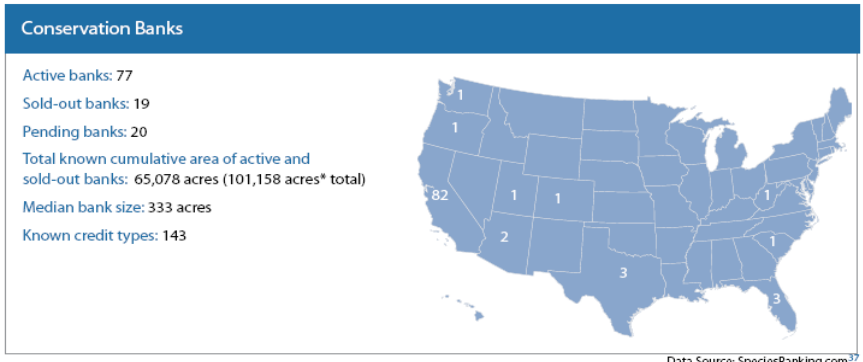
[1] Madsen, Becca; Carroll, Nathaniel; Moore Brands, Kelly; 2010. State of the Biodiversity Markets Report: Offset and Compensation Programs Worldwide. Available at: http://www.ecosystemmarketplace.com/abdmarkets2009.pdf

Figure 1[2]



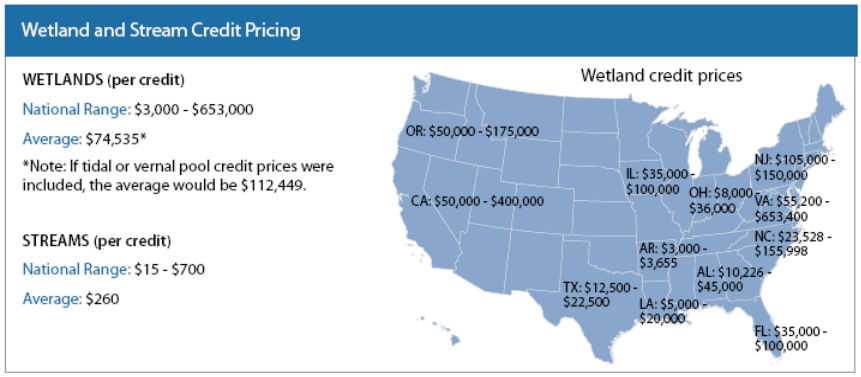
Data Source: Ecosystem Marketplace wetland mitigation database, [23] ELI, 2005[24] (for number of ILF programs)

Figure 2



Data Source: SpeciesBanking.com[37]
*Note: Represents acreage data for all but 4 conservation banks.

Figure 3



vernal pool impacts drive up prices when supply is scarce. The average per credit price for wetlands is US$74,500 (see Figure 3). There are an estimated 25 kinds of wetlands credits traded around the country. Similarly, each endangered species will have a different type of credit, and there are over 90 different types of conservation bank credits in circulation. The median price for conservation bank credits is US$15,000, but prices vary widely. California red-legged frog habitat, for instance, can cost developers anywhere between US$15,000 and US$90,000.[3]

Like real estate markets, mitigation banking markets are highly local. Most mitigation bankers are rural landowners seeking additional revenue from their property or small entrepreneurs with backgrounds as land-use attorneys, developers or environmental consultants. Few of these operators are capitalized for growth and most are focused on one or two small service areas. There are just two mitigation banking companies with national exposure, and the number of regional operators is limited. Consequently, mitigation banking is a highly fragmented market on the supply side with large asymmetries of information surrounding price.

On the demand side, the market in any given service area is relatively illiquid (larger mitigation banks sell 30-100 credits a year; many small banks sell only 5 or 6 credits a year). Private residential and commercial developers make up between one and two-thirds of demand when real estate markets are strong. Public sector transportation, water and defense agencies, as well as extractive companies and utilities, are also frequent buyers. Credits are usually marketed to projects during their permitting stage, and sales may take several years

[2] Ibid. (All figures)
[3] Ibid.

to materialize if the entitlement process is slow. Price information is closely guarded, and transactions are conducted exclusively over-the-counter (OTC).

In summary, mitigation banking is an emerging market with limited transparency and considerable volatility. These characteristics, in combination with a small number of sophisticated operators, mean that traditional lenders generally avoid debt investment in the sector, particularly in the current capital markets environment. Most mitigation banks rely on organic growth, which can make it difficult to time real estate cycles, and even the largest operators are open to equity investment due to frequent capital constraints. To date, mainstream private equity investors focused on real assets have not penetrated the sector due to high technical barriers to entry. As a result, investors who understand the mitigation banking industry are well-positioned to negotiate attractive returns in a sector that has the potential to generate rich returns and is largely protected from competition.

Note: Commentary is current as of April 2010. Reproduction is permitted with proper referencing to New Forests Advisory Inc, San Francisco, California, USA