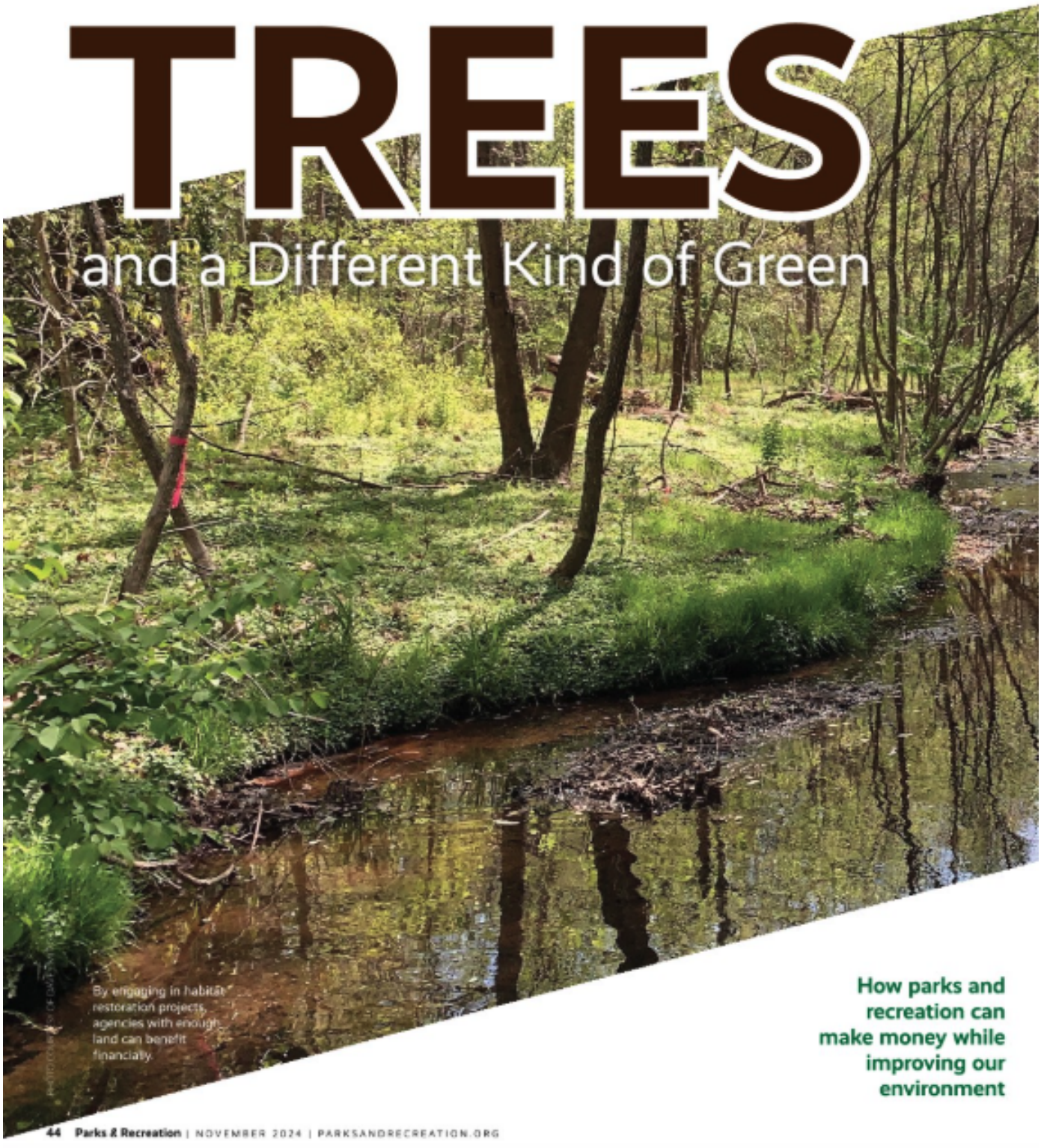

A restored stream corridor — the kind of habitat that generates natural resource credits for park agencies.

NATURAL RESOURCE BANKING

TREES

and a Different Kind of Green

By engaging in habitat restoration projects, agencies with enough land can benefit financially.

How parks and recreation can make money while improving our environment.

By Paul Gilbert

What if you could address the causes of climate change and make money for your agency at the same time? I think most of us in the park and recreation field would say, "Sign me up!"

A growing field of natural resource banking can deliver both outcomes. There are various categories of natural resource banking — wetland banking has been around for decades, and stream banking is also a market with some history. Nutrient banking is designed to filter nitrogen and phosphorus from the stormwater in the states that are part of the Chesapeake Bay watershed: Maryland, Virginia and parts of Pennsylvania. And there is a growing voluntary market in carbon credits. By engaging in habitat restoration projects, agencies with enough land can benefit financially. I call it "doing well by doing good."

How It Works

In 1988, President George H.W. Bush proposed a policy of no net loss of wetlands. This led to the wetland banking system, in which a person or entity could create or expand wetlands and sell that ecological improvement in credits to those that were impacting wetlands. This regulated market approach created the model for all natural resource banking we see today.

All of these natural resource banking activities work in a very similar way. Say you are going to restore habitat and vegetation on a property with low-ecological value, such as mowed

Forested stream corridors like this one can be enrolled in stream and nutrient banking programs.

By Paul Gilbert

What if you could address the causes of climate change and make money for your agency at the same time? I think most of us in the park and recreation field would say, “Sign me up!”

A growing field of natural resource banking can deliver both outcomes. There are various categories of natural resource banking — wetland banking has been around for decades, and stream banking is also a market with some history. Nutrient banking is designed to filter nitrogen and phosphorus from the stormwater in the states that are part of the Chesapeake Bay watershed: Maryland, Virginia and parts of Pennsylvania. And there is a growing voluntary market in carbon credits. By engaging in habitat restoration projects, agencies with enough land can benefit financially. I call it “doing well by doing good.”

How It Works

In 1988, President George H.W. Bush proposed a policy of no net loss of wetlands. This led to the wetland banking system, in which a person or entity could create or expand wetlands and sell that ecological improvement in credits to those that were impacting wetlands. This regulated market approach created the model for all natural resource banking we see today.

All of these natural resource banking activities work in a very similar way. Say you are going to restore habitat and vegetation on a property with low-ecological value, such as mowed fields, degraded streams or wetlands, or land that was previously used for agriculture. Through a regulatory or certification process, your restoration project can be assigned a certain number of credits for the ecological value it will provide by absorbing carbon; slowing and absorbing stormwater; or improving or preserving a habitat type.

Then, when a developer in a different location has a negative ecological impact that is more than they can mitigate at that site, they buy the credits from your project to offset those impacts. For example, if a housing developer damages an area of wetlands, they must buy credits that come from the creation of wetlands within the region. This results in no net loss and establishes a market for created wetlands.

This same approach is used for streams. While you do not create new streams, you can take a degraded stream and cut back the eroded banks, create more turns in the channel to slow the water, and add rock outfalls. With water, it is all about slowing it down. Wetland and stream credit can be made up of 80 percent new or restored habitat and 20 percent conservation of existing, high-quality habitat. Nutrient credits in the Chesapeake Bay region have been modeled using the same approach with the goal of reducing nitrogen and phosphorus from stormwater runoff.

For those generating these credits, planting the trees or other vegetation is the easiest 2 percent of the project. The other 98 percent is all about navigating the regulatory or certification process and the markets. These credits, once created, are truly free market assets, like a stock. When there is a high demand and low supply, the value per credit goes up, and if the demand is low, the value goes down.

The Big Picture

These projects are all very long term, with easements that last from 20 or more years to forever. Funds are taken out of the deal for long-term maintenance so that invasive species can be removed and replantings can happen in the future.

The ecological problem with a market economy is when it does not value natural resources. However, when there is a significant price for emitting a ton of carbon, unmanaged stormwater, or impacting a stream or wetland, the efficiency of the market can be used to address our ecological issues. The greater the cost for these credits, the greater the incentive is to reduce pollution.

You may have seen this in action if you have booked an airline ticket recently. Some airlines will let you get the ticket for a set price, but if you want to pay a little more, you can offset the carbon impact of your portion of the flight. That extra amount the airline will use to buy carbon credits. Those credits result in trees somewhere capturing and retaining carbon from the air.

Recently, a French energy company bought credits that helped preserve or replant large areas across 10 states in the United States for $100 million. The carbon sequestration from these forest areas will offset the company's carbon footprint.

There is a well-deserved focus on green technology these days, whether it is electric vehicles, solar or wind farms. That is all interesting, and we in the United States love our technology. But one of the most powerful technologies has been around for a while: photosynthesis. The wood of trees is mostly carbon that has been absorbed through the leaves and is stored for decades as that tree grows. Forests (and the oceans) are the lungs of the earth.

As land management agencies with a mission to improve the environment, we can play a major role in addressing the causes of climate change, helping to recharge underground aquifers, filtering stormwater and much more. Such efforts are fully compatible with passive recreational activities, like trails, water access, camping, nature education and more.

Environmental, Social and Governance and Carbon Offsets

In Europe, carbon offsets (or credits) are regulated much like wetlands and streams are in the United States. You may have heard of this referred to as "cap and trade." While the United States does not yet have laws/regulations related to this, in recent years, more companies have been seeking to offset their carbon footprint voluntarily.

This is part of a move within some large companies to address a range of environmental and social issues. This voluntary movement is called ESG (Environmental, Social and Governance). Companies that score well on environment, diversity and transparency can earn the ESG rating. Once a company has achieved this, it can be traded in ESG funds, which gives the company access to more capital and likely increases the value of the firm. One thing ESG firms do is buy carbon credits to offset all or part of their carbon footprint. ESG firms are taking a long-term view of sustainability in a changing world.

Bringing Natural Resource Banking to Your Agency

There are firms that specialize in creating these credits and marketing them to the end user. These companies have both a knowledge of the credit markets and a deep understanding of how to create and maintain these habitat types.

NOVA Parks has completed stream and nutrient banking projects, will soon do a wetland project, and is exploring carbon projects for the future.

PHOTO COURTESY OF DAVEY MITIGATION

ing them to the end user. These companies have both a knowledge of the credit markets and a deep understanding of how to create and maintain these habitat types. There is considerable environmental science that goes into the design of the area and plant species selected to achieve the credit goals. With the credit sales, money is put into escrow for long-term monitoring and restoration work to ensure that the environmental enhancements have a real and lasting effect.

"Park agencies are the ideal landowner partner for environmental credit projects, like stream and wetland mitigation 'banks,' nutrient banks or carbon offsets. These entities are, by nature, conservation-minded and generally familiar with, and supportive of, the types of land-use restrictions associated with these types of projects," states T.J. Mascia, vice president of Davey Mitigation. "In that sense, they become a true partner in the project's long-term success." One way to find a partner with the right expertise would be to research stream or wetland bank projects in your region and see what companies were involved in creating those projects. In addition to the technical expertise of creating those habitat types, you also want your partner to have experience with selling these credits.

Northern Virginia Regional Park Authority (NOVA Parks) has completed stream and nutrient banking projects, will soon do a wetland project, and is exploring carbon projects for the future. The results have been both conserved and restored areas benefiting the environment and a new source of capital funding to improve and expand the park system.

The goal to both address climate change and improve the health of our communities can be achieved by filtering carbon out of the air and storing it in the soil and vegetation. Roslyn Johnson, director of Recreation and Parks for City of Annapolis, Maryland, has been a leader in doing this with parkland and has led resource banking projects when she headed the park and recreation agencies in both Prince George's County and Baltimore County, Maryland.

"If we are fortunate, we are always purchasing land to save for future development for parks. These properties have an additional benefit. We are sequestering carbon, thus improving the air quality in communities," remarks Johnson. "This is especially beneficial in densely populated communities, communities with high instances of asthma and other respiratory illnesses, and communities with less tree canopy. The studies are beginning to show [that] in communities where there are less trees and less tree canopy, the health of the community is also decreased. Parks really do save lives," she continues.

Perpetual Motion Machine

While some of these projects can yield seven-figure returns for park and recreation agencies, the market value for such credits can vary based on many factors. With the public's need for more parkland, an ideal situation would be for natural resource credits to raise enough money to buy more land, and for projects on the new land to generate enough for the next acquisition. This would be the perfect perpetual motion machine for growing park systems, restoring our environment and providing more places for the public to recreate.

Paul Gilbert is Executive Director of NOVA Parks (pgilbert@nvrpa.org) and a Member of the magazine's Editorial Advisory Board.

NOVA Parks has completed stream and nutrient banking projects, will soon do a wetland project, and is exploring carbon projects for the future.

There is considerable environmental science that goes into the design of the area and plant species selected to achieve the credit goals. With the credit sales, money is put into escrow for long-term monitoring and restoration work to ensure that the environmental enhancements have a real and lasting effect.

"Park agencies are the ideal landowner partner for environmental credit projects, like stream and wetland mitigation 'banks,' nutrient banks or carbon offsets. These entities are, by nature, conservation-minded and generally familiar with, and supportive of, the types of land-use restrictions associated with these types of projects." — TJ Mascia, Vice President, Davey Mitigation

One way to find a partner with the right expertise would be to research stream or wetland bank projects in your region and see what companies were involved in creating those projects. In addition to the technical expertise of creating those habitat types, you also want your partner to have experience with selling these credits.

Northern Virginia Regional Park Authority (NOVA Parks) has completed stream and nutrient banking projects, will soon do a wetland project, and is exploring carbon projects for the future. The results have been both conserved and restored areas benefiting the environment and a new source of capital funding to improve and expand the park system.

The goal to both address climate change and improve the health of our communities can be achieved by filtering carbon out of the air and storing it in the soil and vegetation. Roslyn Johnson, Director of Recreation and Parks for City of Annapolis, Maryland, has been a leader in doing this with parkland and has led resource banking projects when she headed the park and recreation agencies in both Prince George's County and Baltimore County, Maryland.

"If we are fortunate, we are always purchasing land to save for future development for parks. These properties have an additional benefit. We are sequestering carbon, thus improving the air quality in communities. This is especially beneficial in densely populated communities, communities with high instances of asthma and other respiratory illnesses, and communities with less tree canopy. The studies are beginning to show that in communities where there are less trees and less tree canopy, the health of the community is also decreased. Parks really do save lives." — Roslyn Johnson, Director of Recreation and Parks, City of Annapolis, Maryland

Perpetual Motion Machine

While some of these projects can yield seven-figure returns for park and recreation agencies, the market value for such credits can vary based on many factors. With the public's need for more parkland, an ideal situation would be for natural resource credits to raise enough money to buy more land, and for projects on the new land to generate enough for the next acquisition. This would be the perfect perpetual motion machine for growing park systems, restoring our environment and providing more places for the public to recreate.

Paul Gilbert *is Executive Director of NOVA Parks (pgilbert@nvrpa.org) and a Member of the magazine's Editorial Advisory Board.*