



2016 Impact Report

The Lyme Forest Fund IV LP and Parallel Funds



About This Report

The 2016 Impact Report for The Lyme Forest Fund IV LP and parallel funds (collectively referred to as the “Fund” or “Fund IV”) tracks the positive environmental and social outcomes of the Fund’s investments for the reporting year and since inception. Lyme uses the Impact Reporting and Investment Standards (IRIS) metrics as well as additional relevant metrics to measure the non-financial aspects of its investments.

About IRIS

The IRIS metrics were developed to provide a common reporting language for impact-related terms and metrics. By standardizing the way companies communicate and report their social and environmental performance, IRIS aims to increase the value of non-financial data. This standardization allows performance to be compared and benchmarked, while also streamlining and simplifying reporting requirements for companies and their investors. IRIS was initiated and is governed by the Global Impact Investing network (GIIN), which is dedicated to increasing the effectiveness of impact investments.





About The Lyme Timber Company LP

Founded in 1976, The Lyme Timber Company LP (“Lyme”) invests in and manages timberland and rural real estate with important conservation attributes. The Lyme team has expertise in the careful selection and management of timberland throughout the United States and Canada.

Lyme is a recognized leader in sustainable forest management and conservation. Out of the 1,100,000+ acres in Lyme’s current and historical portfolio, 95 percent have been (or are expected to be) permanently conserved. Lyme’s investments often fill holes in larger conserved landscapes, and their protection helps deliver vital ecosystem services, including:

- ✿ Protection and restoration of streams and wetlands
- ✿ Drinking water supply protection
- ✿ Habitat conservation
- ✿ Carbon sequestration
- ✿ Flood control
- ✿ Maintenance of air quality
- ✿ Soil regeneration
- ✿ Recreational access
- ✿ Ecotourism

Lyme’s investment activities also strengthen rural economies by providing jobs in forestry and logging as well as recreation and tourism.

All of the Company’s working timberland properties are third-party certified to one or both of the two leading sustainable forestry certification programs - the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative® (SFI).



The Lyme Forest Fund IV

In early 2016, Lyme closed The Lyme Forest Fund IV, the company’s fourth closed-end, pooled investment fund, with \$250 million of committed capital. Approximately half of the capital committed to Fund IV was sourced from self-identified “impact investors” who invested with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return.

The Fund’s investment period began in December 2014 and lasts through December 2017, with the potential for a one-year extension. By the end of 2016, Fund IV had invested half of its committed capital in five properties totaling approximately 170,000 acres. Although the Fund is still quite young, 2016 brought some early environmental and social benefits:

- ✿ Working in partnership with The Conservation Fund, the fund sold a 7,090-acre conservation easement to the Wisconsin Department of Natural Resources in May. The easement protects inholdings in Wisconsin’s Brule-St. Croix Legacy Forest, which consists of 72,957 protected acres (the result of a transaction with an earlier Lyme fund) and is the state’s largest land conservation project to date.
- ✿ The Lyme Redwood Forest Company had a very productive first year of management under the Fund and produced nearly 98,000 metric tons of sustainable timber products. Trout Unlimited, in coordination with the Lyme Redwood Forest Company, The Nature Conservancy, and Blencowe Watershed Management, continued salmon habitat restoration on 32 miles of instream habitat. Lyme continues to work with The Nature Conservancy to structure a working forest conservation easement over nearly two thirds of the property.
- ✿ In 2016, the Fund restored the Kincheloe Mitigation Bank (part of the Bunrootis Mitigation Bank investment), which is approximately 314 acres in Harrison and Lewis Counties, West Virginia. The project included 21,600 linear feet of stream restoration and 62.5 acres of riparian buffer planting.



About Conservation Easements

One of Lyme's core investment strategies is to sell conservation easements, which permanently restrict development, but allow income generation from sources such as sustainable timber harvesting, recreational leasing activities and sale of ecosystem services. Lyme has an extensive network of contacts among conservation NGOs and public natural resource agencies. These groups often seek our investment capital and experience to capture important conservation targets, and we rely on them to do much of the political and community outreach necessary to achieve the desired conservation outcomes. In addition, Lyme monitors sources of Federal, state and local conservation funding.

Working Forest Conservation Easements:

- ✿ Are legal agreements that restrict development and other activities agreed upon by the landowner and easement holder in order to protect specific conservation values.
- ✿ Are permanently binding on all future landowners.
- ✿ Leave property in private ownership and management, and on the tax roll
- ✿ Allow government agencies to conserve working forests for a fraction of the cost of purchasing the land in fee and greatly reduce public land management expenses
- ✿ Provide permanent public recreational access in many cases
- ✿ Ensure the property will be managed for timber production, which supports rural economies and jobs by protecting large forested areas that are critical to:
 - Efficient and productive timber harvests
 - Recreation and tourism
- ✿ Carry the potential for helping meet and exceed the requirements of federal and state environmental regulations, including the Endangered Species Act and Clean Water Act
- ✿ Conserve important natural values of a forest property – fisheries, water supplies, wildlife habitat, and open space while ensuring good forest management



About Mitigation Banks

In addition to working timberlands and other high priority conservation land, Lyme also invests in mitigation banks. A mitigation bank is a degraded property that Lyme restores to its original ecological condition. The owner of an approved mitigation bank can sell credits for cash to public and private developers who need to mitigate their impacts.

Up to 15-20 percent of Fund IV capital may be allocated to mitigation banks. Lyme has structured a sub-advisory relationship with Eco-Capital Advisors, LLC (“ECA”), an Atlanta-based advisory firm focused exclusively on mitigation banking. ECA is providing deal sourcing, diligence, structuring, and management services on an exclusive basis to Fund IV.

Regulatory Framework

- ✿ Federal laws (Clean Water Act and Endangered Species Act) require public and private developers to mitigate ecosystem impacts by restoring similar ecosystems to those damaged.
- ✿ Projects that require mitigation include draining, filling, or damaging wetlands for highway construction, real estate development, or other projects. Mitigation is also required to offset the impact of channelizing or rerouting streams and of adversely affecting endangered species habitat.
- ✿ Under US Army Corps of Engineers 2008 guidance, the preferred mitigation mechanism is the project developer’s purchase of credits from nearby mitigation banks that proactively restore degraded lands at a larger scale and ensure their preservation in perpetuity.
 - ✿ Rather than undertake their own restoration efforts, developers can buy mitigation credits from approved mitigation banks.
 - ✿ Regulators oversee these banks and release “credits” for sale based on the bank’s achievement of predetermined ecological success factors.



The Lyme Forest Fund IV Portfolio Summary

Property	State	Description	Strategy	Acres at Acquisition*	Purchase Date
Lyme Gilman Forest Co.	FL	Located near Florida's Gulf coast within the largest area of privately owned roadless land remaining in Florida. This low-lying property is part of San Pedro Bay, FL, a wetland system that supports numerous rare and endangered plants and animals. Third-party certified as sustainably managed by the Sustainable Forestry Initiative (SFI).	Working Lands	22,779	2015 Q2
Lyme Redwood Forest Co.	CA	Includes highly productive stands of redwood and Douglas fir and nearly the entire watershed of the 10 Mile River, which is critical salmon habitat. Lyme is working with The Nature Conservancy to sell conservation easements that will permanently prevent development and provide additional protections for riparian areas. Currently undergoing an audit by the Forest Stewardship Council (FSC) for certification as sustainably managed - certification expected in summer 2017.	Working Lands	111,967	2015 Q4
Lyme Solon Springs	WI	Purchased in partnership with The Conservation Fund, the property is surrounded by conserved lands, including timberlands owned by a prior investment fund managed by Lyme Timber. In May 2016, the Fund sold a conservation easement to the Wisconsin Department of Natural Resources over 7,090 acres of the property. Third-party certified as sustainably managed by SFI.	Working Lands	12,779	2016 Q2
Emory River	TN	Located in the Cumberland Mountains of Tennessee, this tract is part of a larger 200,000-acre conserved forest. It was conserved by a prior owner and is third-party certified as sustainably managed by FSC.	Working Lands	20,061	2016 Q4
Lyme Bunrootis Mitigation Banks	WV	A portfolio of four stream mitigation banks spread across five counties in West Virginia. Three of the mitigation banks were already permitted and selling credits at the time of the acquisition. Restoration consists primarily of conserving streams, recreating stream beds as close to their historical condition as possible, and planting vegetation that was degraded during prior agricultural use.	Mitigation Bank	1,070	2015 Q4

*Includes fee interests, timber rights, and mitigation bank interests at acquisition



Impact Story: Salmon and Steelhead Habitat in California

In California in recent decades, Coho salmon, Chinook salmon and steelhead have declined to very low levels, leading to the protection of some populations under both federal and state Endangered Species Acts. Salmon and steelhead are anadromous, meaning that they are born in fresh water, spend most of their lives in the sea, and return to fresh water to spawn. As a result of their migration, anadromous fish depend on the health of the entire watershed, from the headwaters to the sea, for survival.

In December 2015, Fund IV purchased 112,000 timberland acres on the coast of northern California. The property contains 85% of the watershed of the Ten Mile River, which has intact salmon and steelhead populations. The property has been operated as working timberlands for over 100 years and historic logging practices have produced high sediment and siltation. Although the Ten Mile River is currently on the federal Clean Water Act list of impaired water bodies, it holds great promise for restoration. Typically, land management agencies and NGOs have to collaborate with a patchwork of many private landowners in order to conserve and restore a watershed. Fund IV's large ownership presents an unusual opportunity to improve the entire watershed. Salmon and steelhead habitat restoration is compatible with timber production, provided that no-harvest buffer zones around streams are strictly enforced, roads are constructed and/or restored properly and streams are modified to remove barriers to migration and provide more complex stream habitats. Fund IV is currently negotiating with The Nature Conservancy on the terms of a working forest conservation easement that would impose restrictive forest management obligations on current and future owners. In the meantime, restoration activities are ongoing to ameliorate sedimentation.



According to The Nature Conservancy, “Salmon need streams with an abundance of fallen trees. This woody debris influences the shape of stream channels—creating deep pools, clean gravel for spawning and slow water refuges from high water flows. Wood jams also trap nutrients that increase food availability and provide cover from predators.”

In September 2016, Trout Unlimited, in coordination with Lyme Redwood Forest Company, the Nature Conservancy, and Blencowe Watershed Management, designed and installed instream 13 large conifers with their rootmasses intact. To implement this pilot project, an excavator and bulldozer were used to uproot and topple large conifers (mostly redwood) into the channel within the Ten Mile project area.



Impact Story: Large Landscapes in Wisconsin

From an ecological perspective, large connected assemblages of protected lands are more valuable than small, disconnected and isolated blocks of protected lands. Many of Lyme’s investments fill holes in important conservation landscapes and therefore buffer and leverage past conservation investments.

In April 2016, Fund IV purchased 12,779 acres of timberland in northwestern Wisconsin. The property is surrounded by conserved lands, including timberland owned by a prior investment fund managed by Lyme Timber. The property and the surrounding area contain rare natural pine barrens habitat, which hosts an abundance of unique and threatened species. Because of the significance of these ecosystems and the property’s adjacency to existing conserved lands, the state of Wisconsin has already approved the purchase of a conservation easement on 7,090 acres of the Lyme Solon Springs Forest. These lands are part of a much larger, multi-state block of conserved lands that encompass over 2.9 million acres. Conserving a large land base through working forest conservation easements not only protects ecological resources, but also ensures a stable climate for forestry-related businesses.





Impact Story: Stream Restoration in West Virginia

In November, 2015, Fund IV acquired real estate and easement rights underlying four stream mitigation banks spread across five counties in West Virginia. Fund IV is responsible for completing restoration on two of the banks, which had been degraded primarily by agriculture and cattle production. The streams had previously been straightened and pushed to the edges of the valleys in order to create more pastures. In addition, the cattle trampled banks, destroyed buffers and contaminated the streams with their waste. Fund IV's restoration work on these properties consists of removing cattle, perpetually conserving the streams and associated buffers with conservation easements, and then physically relocating and otherwise creating new stream beds and corridors as close to their historical condition as possible. In 2016, Fund IV restored Kinchloe Creek in Harrison and Lewis Counties, West Virginia.

Kinchloe Creek Restoration

- 21,600 linear feet of stream restoration - excavating and stabilizing meandering channels and abandoning old stream channels that had been trenched in the past to drain the adjacent land for agricultural purposes.
- Over 1,000 in-stream habitat structures (constructed using rock and timber harvested onsite) installed to improve habitat for aquatic life. These structures were designed to promote the development of riffles and pools, which are not only essential habitat for fish, but also increase dissolved oxygen levels by increasing turbulence in streamflow.
- Riparian buffer planting included converting pastureland to bottomland hardwood forest. Planted trees and shrubs included a mixture of soft and hard-mast species.

Kinchloe - Before Restoration



Kinchloe - After Restoration





The Lyme Forest Fund IV Impact Summary

Impact Metric	IRIS ID*	Unit	2015	2016	Cumulative
Land area directly controlled: Sustainably managed – Area of land directly controlled by the organization and under sustainable cultivation or sustainable stewardship as of the end of the reporting period	I6912	Acres	135,816	168,656	
Operational Certification – Third-party certifications held by the organization that are related to its business processes and practices and that are valid as of the end of the reporting period	OI1120	Acres	22,779	55,619	
Protected Land Area: Permanent - Land permanently protected through conservation easements or fee sales during the reporting period	PI3924	Acres	314	7,090	7,404
Protected Land Assemblage – Number of acres of contiguous protected land areas as of the end of the reporting period	PI5750	Acres	0	3.1M	
Units/Volume Sold During Year – Sustainably harvested wood products during the reporting period	PI1263	Metric Tons	0	164,421	164,421
Trees Planted: Native Species – Acres of native species planted by the organization during the reporting period	PI3848	Acres	0	851	851
Fresh Water Bodies Present – Surface area of freshwater bodies present during the reporting period on protected and sustainably managed land as of the end of the reporting period	PI7170	Acres	13,258	13,289	
Jobs maintained at directly financed enterprises – Number of full-time equivalent employees working for enterprises financed or supported by the organization as of the end of the reporting period	PI5691	FTEs	15	47	
Ecosystem Services – Ecosystem services provided by land during the reporting period. Report for land directly or indirectly controlled during the reporting period	PD8494	<ul style="list-style-type: none"> • Biological raw materials • Freshwater • Maintenance of air quality • Habitat • Nutrient cycling • Water cycling • Recreation and Ecotourism 			