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OPINION // OPEN FORUM

How Meta, Google and Amazon are quietly damaging the Pacific sea floor

By **Hayley Brazier**

June 26, 2024

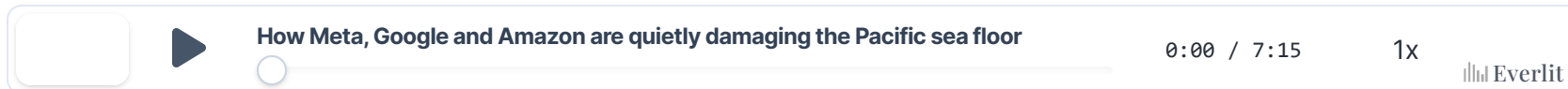
 Gift Article





The Skagerrak lays undersea cable near the New York-Connecticut border in the Long Island Sound for Connecticut Light & Power in 2008. Undersea cables disrupt sealife and can pose environmental hazards.

Chris Prevolos/Hearst Newspapers 2008



In 2020, Edge Cable Holdings, a Facebook subsidiary, was burying a new fiber-optic cable into the seabed near Tierra Del Mar, Ore. Working beneath a rugged mixture of basalt rock mounds, unconsolidated sands and sandstone bedrock, the company's drilling operation went awry. Stalled out, the company ditched its metal pipes, drilling fluids and other construction materials in the ocean: Out of sight, out of mind.

When Oregon's Department of State Lands learned of the abandonment, it ordered Edge Cable Holdings and Facebook (now Meta) to pay a fine. But the damage was done. Two sinkholes formed along the installation path and most of the materials will remain lodged in the seafloor forever. These items, and thousands of gallons of drilling fluid, pose a risk to the surrounding seafloor ecosystem. Despite public outrage, the company returned to complete the cable in 2021, with debris from the first attempt still lodged in the seabed.

The cable was not the first to slither into Oregon's stretch of the Pacific Ocean, and it's by no means the last. Big technology companies — including Amazon, China Mobile, and Google — are flocking to Oregon's coastline to land transpacific fiber-optic cables. Most recently in August 2023, the Department of State Lands approved a 9,500-mile fiber-optic cable connecting Singapore, Guam and the United States.

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What has transformed Oregon into an undersea cable hotspot, and how is the installation process affecting a vibrant ocean ecosystem? The explanation resides in tax breaks, swift permitting processes, cheap energy, vast amounts of open land for data centers and a historical carelessness for the environment shared by the state and tech companies.

Fiber-optic cables transmit data with pulses of light through thin glass fibers. In 2022, they provided over 98% of the world's internet services and international phone calls. There are more than 745,000 miles of submarine fiber-optic cables in operation around the world — that's enough cable to wrap around the Earth's equator more than 29 times. It's the work of cables, not satellites, that connect us on a global scale.

Although undersea cables seem to be torn from the pages of a futuristic science fiction novel, they

e-Edition

Account

The Pacific, a wider and deeper ocean basin and therefore more difficult to wire, received its first transoceanic cable in 1902. By the early 1900s, the global seafloor hosted around 200,000 miles of telegraph cables. By the 1950s, there were nearly 500,000 miles of telephone and telegraph cables, with fiber-optic cables joining the mix in the 1980s.

Back then, many transpacific cables landed in California, Washington and British Columbia, where they could link up with transportation hubs and industrial centers on land. That began to change in 1991 when Oregon landed its first transpacific fiber-optic cable. Called the North Pacific Cable, the privately owned line connected Oregon to Alaska and Japan. In the three decades since, the state has welcomed a new fiber-optic cable every four or five years, in tandem with new data centers — large, high-security buildings that store rows of servers. These servers host the internet's millions of websites.

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There are significant onshore incentives for cable owners to land their lines in Oregon. The state's enterprise zones tax-exemption program allows individual towns to negotiate property tax breaks for big construction projects, saving companies millions of dollars each year. In exchange for the tax breaks, tech companies provide a small influx of jobs and tax revenue to small communities hurting from the decline of the timber industry. In 2015, [Oregon lifted its cap](#) on enterprise zones to attract even more data centers, just as more cables arrived along the shoreline.

Consider Meta, which owns a 4.6 million square foot data center complex in rural Prineville. Although it's far from the ocean in a former timber town, this data center connects to a network of underground fiber-optic cables, including the controversial undersea cable installed near Tierra del

Mar. In 2015, the Oregonian newspaper reported that the data center complex received \$30 million in tax breaks during the previous two years.

For Meta, as well as Amazon, Google and Apple, Oregon offers a win, win, win.

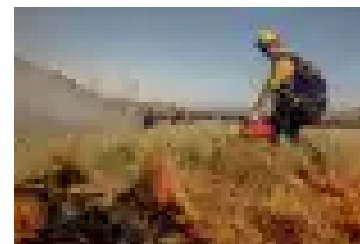
So who exactly is losing?

The coastal ecosystem. During installation, it's standard practice to bury cables multiple feet into the seabed to avoid snags by fishing vessels. The most common burial method is plowing, during which a remotely operated vehicle cuts a ditch into the seafloor and inserts the cable into the trough. Another method, jetting, uses high-pressure fluids to liquefy sediments on the seafloor, easily slicing a clean line into the seabed in which the cable can burrow. Companies also use directional drilling to bore diagonally into the seabed from the shore. All of these methods squish or displace any worms, crabs, sea stars, urchins, anemones, corals or sponges living within the trenching path.

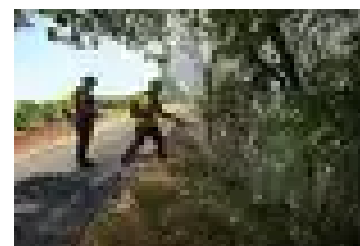
Once installed, submarine cables settle into the seafloor ecosystem. In search of a hard substrate to call home, marine life will colonize the cable's exterior. After a few decades of service, cable owners have historically abandoned their lines in the ocean, a decision that is cheaper for companies and often results in less disturbance for colonizing species. Inert but not biodegradable, most dead cables will sit in the ocean indefinitely, hidden from the public who is usually none the wiser.

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The 2020 Facebook/Edge Cable Holdings abandonment prompted Oregon to pass [a law in 2021](#) that instituted firmer planning and decommissioning regulations for new undersea cable projects. Still, the increasing scrutiny doesn't appear to be slowing the big tech companies. As Amazon builds its recently approved line to Guam and Singapore, the tech giant is also building another data center in Umatilla, a small town on the Columbia River.

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Data centers are no better for terrestrial environments than submarine cables are for marine. The buildings suck significant amounts of power from the grid. Oregon's renewable energies, like hydroelectric dams on the Columbia River, can't cover data centers' growing energy demands, meaning utility providers must tap into fossil fuels and increase their greenhouse gas emissions. Despite Oregon's efforts to decrease the state's carbon footprint, some regions are moving backward in the fight against climate change. Big tech companies, and their big buildings, are spurring that reversal.

Across Oregon, communities and ecosystems are confronting the physical impacts of a world that runs on the internet — impacts that our regulatory systems have yet to reckon with.

Hayley Brazier is a marine environmental historian who researches water and society. She is writing a book about aging machines in the dark depths of the ocean. This was written for [Zócalo Public Square](#).

June 26, 2024

Hayley Brazier

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