

# LS Networks Launches Connected Communities Project

A middle-mile network provider in Oregon has a new mission: creating 25 rural gigabit communities.

By Masha Zager / *Broadband Communities*

**M**ore than a decade ago, five Oregon electric cooperatives and the economic development arm of the Coquille Indian Tribe joined forces to build a middle-mile fiber network. The original goal of the consortium, LS Networks, was not to deliver broadband services directly but to make it economical for others to do so. The company, whose shareholders are all nonprofit entities, views its mission as providing services before profit and using telecommunications “as a tool to bridge the communities that make the Pacific Northwest great,” in the words of Bryan Adams, the director of sales and marketing.

The network serves carriers that include long-distance and local telephone companies, wireless providers and independent cable operators as well as the communications divisions of some member companies.

As time went on, the middle-mile network expanded throughout Oregon, rural Washington, Northern California and Idaho (it now has more than 7,500 route miles of fiber). True to the company’s mission, the network spurred economic development throughout the area. Though still primarily a wholesaler, LS Networks began to directly serve state and local government agencies, schools, hospitals and some businesses.

In 2012, it started building fiber to cell towers and now reaches more than 500 of them. Because cell towers tend to be located near

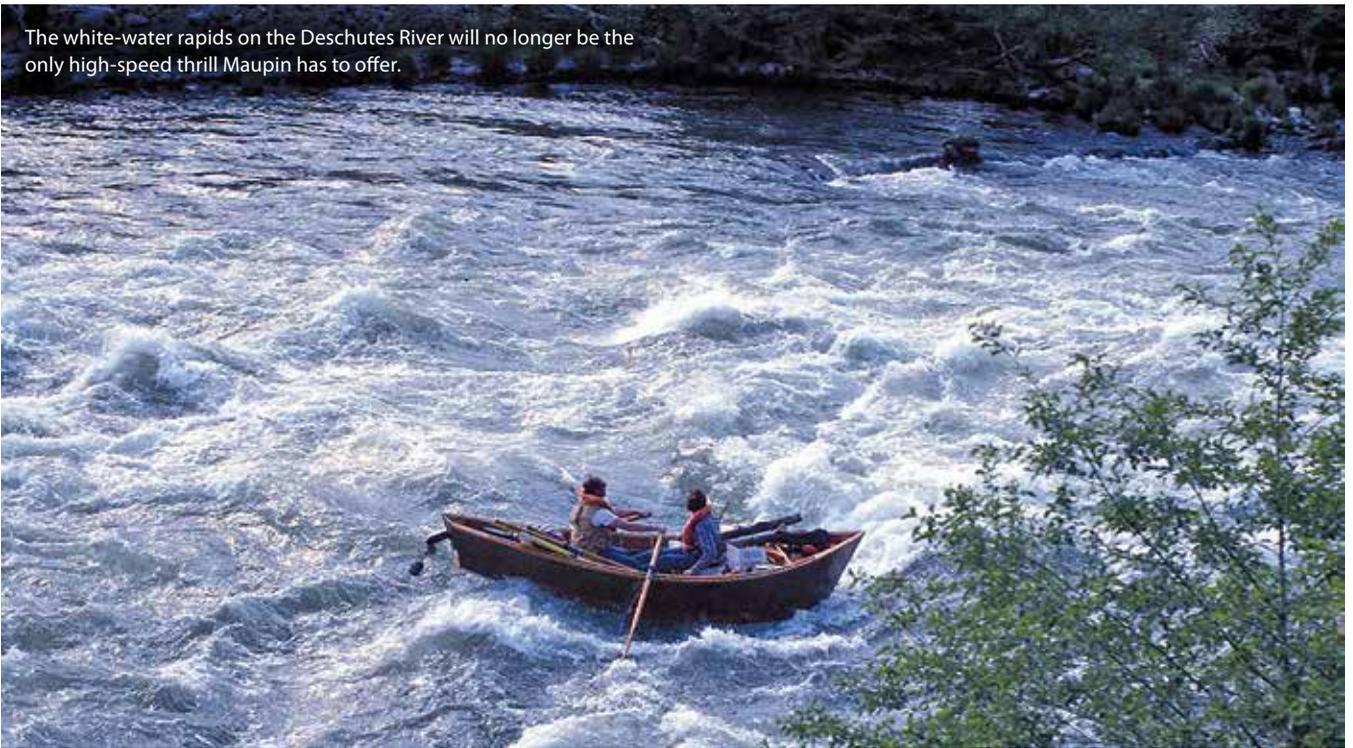
clusters of residences and small businesses, this opened up yet another opportunity. Adams explains, “The network is now built out to the point where we can, with fairly minimal costs, start building larger local distribution networks in the communities we serve – not just for business customers but for residential customers in underserved communities.”

So in October 2016, the company announced an ambitious new goal: deploying gigabit FTTH networks throughout 25 rural communities in Oregon and Washington over a five-year period. Through this “Connected Communities” project, LS Networks will offer 100 Mbps for \$40 and 1 Gbps internet speeds for \$70, providing advanced services in communities that desperately need them. The networks will all be open to additional providers.

## CONNECTING MAUPIN

By the time the 25-city initiative was announced, the first city build – in Maupin, a city of about 400 in north-central Oregon – was already in progress. The Maupin project came about fortuitously. Mayor Lynn Ewing explains that the city, which was trying to obtain a high-speed network, secured a \$410,000 grant from Business Oregon, a state agency, through a partnership with the QualityLife Intergovernmental Agency (QLife). It planned to use the funding, along with a smaller private grant, to build a fiber line from a Bonneville

The white-water rapids on the Deschutes River will no longer be the only high-speed thrill Maupin has to offer.



Power Administration facility several miles out of town and loop it around Maupin's business area.

Maupin's partner, QLife, is a collaboration among public entities in The Dalles, about 40 miles from Maupin, that created a fiber optic loop through that city in the early 2000s. Its goal is to enhance the region's economic development efforts with links to the Bonneville Power Administration's fiber.

When LS Networks, which was getting ready to build fiber to a cell tower in Maupin, learned about the city's plan, it suggested that, rather than duplicate the fiber trunk, the city should connect to LS Networks' fiber and use its grants to build an access network inside the city. The city repurposed the grant money to connect every home and business in Maupin and contracted with QLife to build and manage the access network.

LS Networks invested \$690,000 to build the fiber trunk and establish a point of presence in town. Within the POP, it provided half the rack space free of charge to the city so additional service providers can colocate there. "We want to make sure open access is real," says Adams.

As of press time, LS Networks was on the verge of connecting Maupin's school and several cell providers, and it will begin turning up resident and business services in spring 2017. A second provider, which now operates in the area as a wireless ISP (WISP), will also offer services over city fiber and, with fiber backhaul, will improve its wireless offering outside the city. Says Ewing, "Hopefully, the fees paid by the two providers will cover repair costs for the network going down the road."

### THE FUTURE OF MAUPIN

Ewing expects the new network to benefit Maupin greatly. "We're essentially dependent on tourism for our economy," he says. "A lot of homes are owned by people who don't live here, several by people in high-tech industries. But because of the lack of internet, they don't live here full time. Some of those have said they plan to be here more, or even full time, and telecommute – that will be huge."

Businesses that depend on the internet to book fly fishing and rafting trips struggle with dropped calls and unreliable connections, so the fiber network will make an enormous difference to them. "A couple of times

last summer, the DSL lines went down on weekends, and businesses couldn't take credit cards," Ewing says. "They lost thousands of dollars." The city also hopes to attract other types of businesses – for example, manufacturers of recreation-related equipment – that would not previously have considered Maupin as a location.

The city and the schools have already signed on as customers, says Ewing, a retired schoolteacher. "Today the schools have to limit other network uses when they do state testing, which is all online. Now there should be enough bandwidth for everyone. This will make it more feasible for students to take online classes from community colleges or universities."

The local health clinic, which is operated by a nurse practitioner and a doctor who visits once a week, plans to set up a gigabit connection to a large hospital. "They won't have to send people on a 90-mile trip to see a doctor," the mayor says.

### THE NEXT 24 COMMUNITIES

Though LS Networks has not yet announced the other 24 connected communities, it is in discussions with nine of them and hopes to select all 24

# FTTH DEPLOYMENT

within two years. The company doesn't expect to follow the Maupin template everywhere but rather to adapt to local needs and conditions.

"Each community is kind of a custom deployment based on its interest and participation levels," Adams explains. "We're trying to sit down with the communities – city council members, mayors, community members who want better broadband – and figure out what's best for them."

In one city, LS Networks is working with a local cable TV cooperative that just received state funding for an FTTH project. "Rather than competing with the cooperative, we're trying to assist it," Adams says. "We'll provide it with middle-mile access to peering exchanges and support its initiative." In another city, LS Networks plans to serve businesses and schools with fiber and work with WISPs that will provide residential

services. He notes, "Because of our success with the cell tower business, we can provide affordable transport service that allows the WISPs to have a successful business model."

In another city that doesn't yet have much demand for FTTH, LS Networks plans to start by improving the wireless infrastructure to boost the quality, reliability and capacity of service and then look for individual neighborhoods where building fiber might make economic sense. "We have a survey that municipalities can send out to residents," Adams says. "It asks whether they're happy with their service provider, whether they're interested in fiber to the home, and what their level of interest is. If there's strong enough interest, we'll do engineering and cost estimates and see if [the city] can help fund it."

In its market studies, LS Networks focuses on communities

with populations of less than 15,000 because they are more likely than larger communities to be underserved. Its 25-city buildout may cover as many as 200,000 residents altogether. That doesn't mean it isn't talking to larger communities, too – such as Eugene, Oregon, whose municipal fiber network is ready to expand beyond the pilot-project stage – but in those cases, it is more likely to provide transport and help enable open access.

"It's refreshing to work at LS Networks," Adams adds. "It's a different business model that allows us more flexibility. The focus is on quality of services and not on how much money we can siphon out." ❖

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