

# **Connectivity Grant**

**Lake County ESD  
&  
Lake County School District #7**

Proposed Projects: Install fiber optics  
Update wireless connection between Union School & DMS  
Install wireless connection inside 5 school buildings & ESD

Total Amount Requested: \$25,000

### **Background**

Lake County is the third largest county in Oregon with an area of 8,340 square miles. Over 78% of this area is owned and managed by the federal and state government. The county ranks 32<sup>nd</sup> in the state in terms of population with 7,400 residents. Fifty-five percent of the county's population lives within the Lakeview Urban Growth Boundary. Lakeview is the seat of Lake County, and the county's largest community with a population of a little over 2,500. Lake County is dotted with the small communities of Paisley, Christmas Valley, Fort Rock, Silver Lake, Adel and Plush. Lake County ranks third in Oregon for its poverty level on an individual basis and ranks second for the percentage of families living in poverty. 35-42% of students are eligible for free or reduced cost lunches, and 20-25% of the adults in Lake County are not high school graduates.

Five small, rural school districts are served by Lake County Education Service District. Two are one-room school houses: Plush (5 students, K-3<sup>rd</sup> grade) and Adel (9 students, 4<sup>th</sup>-8<sup>th</sup> grade). The other three school districts serve K-12: Lakeview (727 students), North Lake (261 students) and Paisley (85 students). Currently all school districts are connected to the internet via T-1 lines paid for by the ESD with a Maximum Circuit Bandwidth of 1.54 Mb. For the four smaller school districts, this level of bandwidth is more than satisfactory. However, for our largest district, Lakeview, this is not sufficient and the ESD is working with the Superintendent and Director of Technology to provide a permanent solution to this problem. Rather than adding more T-1 lines, we feel the only long-term solution is to gain internet access through a fiber connection. To this end Lake County ESD and Lake County School District #7 have been collaborating with several other public agencies in our community (Lake County Administrative Offices, Lake District Hospital, and the City of Lakeview) for the purpose of securing fiber connectivity for all parties and sharing the initial one time expense.

### **Project Description**

A major technological challenge faced by Lake County School District #7 is low levels of bandwidth for students and staff. To meet this challenge, we have three specific goals:

- Increase the speed of internet access via fiber optics;
- Update a wireless connection between Union Elementary School and Daly Middle School; and
- Install a wireless connection within the 5 school buildings and Lake County ESD.

In order for all of the Lakeview students to have access to internet via this fiber connection, certain wireless equipment will need to be updated. One rural school in the district, Union Elementary School, receives internet access by way of a wireless connection that accesses another school building's T-1 line. This connection is approximately 10 years old and is under the 10 MB minimum connectivity. Needless to say, it has become very high on the priority list of necessary updates.

For this school district, a high-speed fiber connection would add a whole new dimension to the classroom curricular opportunities. For example, our teachers could take their students on virtual tours of museums and historical buildings, download documentary films thereby greatly expanding the media library, or bring in outside experts through a download or video-stream. As the current Director of Technology often states, "the only limitation is your imagination." And the same is true for Lake County ESD in terms of the training opportunities we could offer our component school districts and our own staff. Providing these types of trainings and virtual fieldtrips would be of great value to our students, staff and teachers as they are often unable to participate in off-site professional development due to the remote location of Lakeview and attendance costs. The Professional Development portion of each school district's budget, including the ESD's, is not sufficient to send staff out of the area on a regular basis for valuable training or bring trainers in from great distances.

Of course, with all these new possibilities, the schools' demand on their existing computer labs would become even greater. This grant will provide the opportunity to install hardware to provide wireless access points in District #7 school buildings. This will allow the teachers to use internet resources in their own classrooms. With wireless capabilities, practically any classroom would be able to emulate a computer lab.

Providing wireless access to the internet through a fiber connection for all of the District #7 buildings and the Lake County ESD is a long term solution to our bandwidth problems. This increased level of bandwidth will be able to support our student and staff usage for many years to come. The wireless connectivity aspect of this project alleviates demand on the district's existing computer labs

and opens up instructional opportunities within each classroom for technology to be integrated within each lesson.

In terms of financial stability, it is a solid plan. As mentioned earlier, we have been in meetings regarding fiber access and have already talked with one company to provide this service. According to our initial talks, the month-to-month cost of the fiber should not exceed what we currently pay for the district's T-1 lines. This, of course, is contingent upon an extended contract (3-5 years) with this company, which should prove to be to our advantage in that we will know our annual costs in advance.

### **How Our Proposal Satisfies the Criteria Outlined in Section E**

This proposal satisfies the criteria outlined in Section E in the following ways:

- The infrastructure in Lake County ESD and Lake County School District #7 is already in place;
- Lake County ESD has taken the lead in establishing a partnership with local public entities in the area with a common goal – increased bandwidth;
- Upgrades our bandwidth connectivity from 1.54 Mbps up to ~10 Mbps;
- The hardware requested is allowable according to the list provided by the grant criteria;
- It requires one-time funding to be in place; and
- Lake County ESD is committed to continue funding ongoing monthly costs associated with the fiber and T-1 lines as a Resolution Service.

### **Sites Covered and Number of Students/Educators Served**

Lake County School District #7: 5 School Buildings & 1 District Office Building

727 Students + 48 Home School Students

Lake County ESD: 1 Building

Total Educators in Lake County: 113

### **Key ESD and/or School Staff Involved in the Proposal**

Lake County School District #7: Evan Reese, Director of Technology  
Lake County ESD: Sara Sarensen, Business Manager

### **Description and Role of any Contractors involved in Proposal**

Lake County ESD and Lake County School District #7 have solicited a bid from Hunter Communications, located in Central Point, for installation of the fiber. Most recently this company completed the installation for fiber for the Klamath County School District. Richard Ryan, President of Hunter Communications, is able to provide fiber access at the same price as T-1 lines because his goal is to make his profit from residential and commercial accounts after installing the fiber in the schools. The role of Hunter Communication will be the installation of the fiber and leasing, again with the continued lease cost to be similar to what Lake County ESD is currently paying for T-1 lines.

### **Description of How the Grant Funds Leverage other Resources**

Effective with the 2008-09 school year, Lake County ESD has entered into a consortium with fourteen other Oregon ESDs to provide video streaming to all the five constituent school districts in Lake County (Learn 360). Without the fiber installation in District #7 and Lake County ESD, data problems would exist, making it necessary for staff to download videos the evening prior to use during the day with their students.

Also, Lake County School District #7 has hired a Director of Technology this year whose duties, in part, are to work with the classroom teachers on how to use technology in their classrooms. Having internet resources easily and quickly available would likely encourage teachers to apply technology in the classroom.

As mentioned before, Lake County ESD has taken a leadership role in organizing meetings with other community agencies regarding obtaining fiber access for all involved. These agencies are Lake District Hospital, Lake County Commissioners and Administrative Office, and the Town of Lakeview. This grant will allow us to leverage the resources of these public entities as well as to manage the initial cost of the installation of fiber.