## Kalispell to Hot Springs Fiber

This investment increases the communications bandwidth between Munro and Garrison substations and allows the generation limit at Hungry Horse Dam to be increased. The timing of the investment allows the work to be completed in conjunction with the rebuild of the Kalispell – Kerr No. 1 line, resulting in savings of approximately \$3 million.

The current communications bandwidth limitations are due to the use of SONET radios for the Kalispell to Hot Springs segment. The radios were used because BPA was unable to gain access to tribal lands to install fiber when digital communications were first installed. While the current SONET radios have limited bandwidth, the limitation would be exacerbated with the installation of OMET (scheduled for 2018). In addition, BPA currently leases one fiber circuit from NorthWestern Energy for meter data. That lease will be eliminated with the installation of this fiber.

Hungry Horse Dam generation is currently restricted to 310 MWs due to local transmission constraints. During high river flows, this generation restriction requires higher spill levels. The additional spill makes it very difficult to manage to the dissolved gas requirements. The RAS portion of this investment will allow the generation limit to be raised to at least 360 MWs which will provide more flexibility in managing spill.