**Wastewater System Across Three Jurisdictions**
Donna Phillips, GISP, City of Hayden, ID
Representatives of Hayden Area Regional Sewer Board & Their Entities

Abstract text: The Hayden Area Regional Sewer Board (HARSB) is a coordinated effort of the City of Hayden, Hayden Lake Recreational Water and Sewer District (HLRWSD), and Kootenai County to collect the wastewater generated by these three entities and treat it at a treatment facility operated under a joint powers agreement by all three entities. As part of their maintenance requirements, the entities needed to find a way to inventory, update, and manage their individual assets, while still working seamlessly with HARSB employees. All of the entities had access to GIS layers for base data, master planning data, record drawings, archived video of lines...but nothing that would consolidate all of this data into a single location. This presentation will discuss the step that the three entities went through to get to the system that they utilize today. It will show how the GIS systems that each entity had in place could be updated periodically and enhanced through several 3rd party software and hardware solutions working together in a seamless network.

**Implementing Asset Management in the Cloud using Ground Based LiDAR**
Chet Hagen and Lauren Woodruff, Multnomah County - DCS Business Services, Portland, OR

Abstract text: It is a rare case in our line of work that a majority of critical factors which push an organization towards an asset management paradigm fall in place concurrently. In the case of Multnomah County Road Services, an opportunity for change was created by new staff and management, a brighter budgetary outlook, an aging Microsoft Access database with significant deferred maintenance, and evolving central IT policies. Utilizing a 3D mobile scan, which included panoramic imagery and high density LiDAR, all of Multnomah County's roads were driven in the summer of 2014 in order to connect our sign inventory to a GIS for the first time. The goal of the project was to develop a series of layers to manage our traffic signs using a GIS-centric Asset Management software package entirely in the Cloud. Working with our central IT partners, we have selected the Cartegraph Operations Management Software (OMS), and are in the process of diagramming our workflows, researching best management practices, and changing how our Traffic Aids Group conducts their business. This presentation will focus on what conditions made this major change possible, the technology and process we used to scan our roads, the development of our sign inventory, and finally a discussion on why we chose Cartegraph OMS, lessons learned in our first year, and plans for the future.

**As-Builts: Proper Records Management Processes Aid Asset Management**
Elaine Eberly and Dean Noble, Seattle Public Utilities, Seattle, WA

Abstract text: Seattle Public Utilities (SPU) began to seriously invest time, money and resources into the asset management model over 10 years ago. The result of the intense effort has been most beneficial: better integrated business systems; a re-modeled work management and inventory system; improved reporting; established condition assessment processes; accessible data for predictive modeling and life cycle costing. Despite these and other gains, one problem that had been known to exist for many years still eluded resolution even though numerous attempts at repair had been tried. SPU as-built process was broken and movement to the asset management model was not the fix!

Once assets are constructed as-builts are meant to represent what exactly, and finally, was installed and which assets were accepted by the owner. Owners consider as-builts a supporting record of the assets for which they are responsible to manage over the course of their lifecycles. In SPU case it was not unusual for field staff to be maintaining assets for which no as-built could be found; only the institutional knowledge of the staff could be relied upon when the assets needed repair or removal. In such instances asset ownership would often be questioned.

Many factors contributed to the problem. For example, poor follow-through on construction contracts; the fact that established business processes of a different City department paid to install SPU assets resulted
in delay of record circulation (sometimes by years); few formalized audit trails existed; and inconsistent production of as-builts representing installs performed by SPU own staff. It’s almost the rule that the one asset for which there is no record is the one asset most likely to cause an owner the most grief. It will be the unrecognized catch basin or trash rack that leads to citizen property damage or the valve that must be closed in an emergency situation but which no one can find. To manage assets properly an entity must first know of them.

Over the years many players raised the broken process flag but unfortunately other priorities took precedence. In 2014, however, SPU decided to seriously tackle the issue and recommended a review of ten discrete as-built information workflows with an eye towards improvement. The presenters will share with the audience their processes and findings as well as outline for interested parties where the biggest blocks to process improvement were discovered.