

**2013 Water Reuse Conference
May 15 and 16 Boise Idaho**

Name: Jon C. Schladweiler; P.E.

Title: Sewer Historian,

AZ Water Association

<http://www.sewerhistory.org/index.html>

Session Title: Tracking Down The Roots Of Our Sanitary Sewers

Abstract: *“I would liken the evolutionary development of sewers to the “bio-rhythms of life”; it has indeed had its ups and downs over the past 10,000 years ... with the downs being really low!”*

This presentation will trace the development of sewers from 3500 BC on through to the early 1900's. The early sewage infrastructure ... which was almost always created primarily, and initially, for conveying storm water away from populated areas ... would evolve to early high point (of ingenuity and creativity) at about the time of the Fall of the Roman Empire; from there, civilization (its infrastructure, and “manners”) went downhill for the next 1600 years. With time and need, the early conveyance systems became combined systems.

It wasn't until the mid-1800's that people began to understand that “filth”, when mixed with their water supply, resulted in disease and death. Then, the evolutionary development of modern day sewers, re-energized and, as such, began a betterment of sanitary conditions in then higher populated areas ... i.e, an “up swing” was started. The advent of separate sanitary sewage conveyance systems was a by-product of that change.

Sewers in the America: Some knowledge was remembered (and borrowed) from our forefathers' experience in Europe - but Americans had to learn for themselves as our towns and cities recognized the need for sanitary sewers. A lot of the “standards” set in the 1870's thru 1920's for sewage conveyance are basically still in use today; the changes since then have primarily been in “materials” and “methods” available for installation.

Through the presentation, *Tracing Down The Roots Of Our Sanitary Sewers*, you'll be walked through time, and the need for ... and the evolutionary growth of sewers ... with the aid of photos, sketches and anecdotes. Hopefully, you'll come away with a better appreciation for the “roots” of our modern day sewage conveyance systems ... and, the “ups and downs” they have traversed through the ages.

Professional Background:

For more than fifteen years, Jon Schladweiler, P.E., the Historian of the Arizona Water Association, has researched and collected materials related to the history of sewage conveyance systems. Many of these have been displayed in a traveling exhibit entitled

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"The Collection Systems Historical Photo and Artifacts Display." The overall collection of sewer history materials covers the era from approximately 3500 BCE through the 1930s CE. Mr. Schladweiler was the recipient of the Public Works Historical Society and the American Public Works Association's Aedile Wolman Award, recognizing his outstanding contributions toward the collection, preservation and dissemination of public work's history; for his oral presentation, "Tracking Down the Roots of our Sanitary Sewers".

Jon C. Schladweiler, P.E. is the Historian for the AZ Water Association. Over the past 23 years he has researched and collected materials related to the history of sewage conveyance systems. Many of these items (photos, articles, artifacts, etc.) have been displayed in the AZ Water's traveling Sewer History Exhibit and/or his website; sewerhistory.org. Jon holds a Bachelor of Science Degree (Civil Engineering) from the Univ. of Wisconsin and has worked in the wastewater industry for over 35 years.

He is currently employed with the engineering and environmental consulting firm of WestLand Resources, Inc. of Tucson, AZ; as a Technical Advisor and Mentor.

He is a registered P.E. in the states of Arizona and Colorado.

Mr. Schladweiler is an active member of the Water Environment Federation, the AZ Water Association, the American Water Works Association and the American Public Works Association/ Public Works Historical Society.

In 2002, The Public Works Historical Society of the American Public Works Association selected Jon as the recipient of its Aedile Award; recognizing his outstanding contributions toward the collection, preservation and dissemination of public works history. Mr Schladweiler was selected for the award for his oral presentation, "Tracking Down the Roots of our Sanitary Sewers".