NASSCO's Pipeline Assessment and Certification Program (PACP©)
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Every day seems to bring a new regulatory requirement or a new organizational directive that wastewater collection system managers must find a way to meet with the limited amount of time and money available. However one thing that does not change is the fact that the better the information professionals have to work with the better prepared we will be to make decisions.

The most basic information we need in the wastewater collection system industry is the condition of the sewer pipe from a structural, maintenance, and physical dimension perspective. Our most important tool in assessing the condition of a sewer pipe is by means of internal television inspection. Unfortunately with 19,000 wastewater collection systems in the United States we perhaps have just as many different ways to evaluate the sewer pipe condition.

NASSCO is implementing a Pipeline Assessment and Certification Program (PACP) to provide standardization and consistency in the way we evaluate sewer pipe condition and how we manage TV inspection results. The goal of the NASSCO PACP is to create a comprehensive and reliable reservoir of data to describe the sewer pipe that can be used in prioritization, planning, and renovation of wastewater collection systems.

NASSCO is assisted in the PACP development by the Water Research Centre (WRc). Many utilities throughout the United States use various adaptations of the TV inspection coding system developed by WRc in the United Kingdom and recognized as the standard in the UK and much of Europe. The WRc codes are being updated for use in the PACP and will include enhancements that better address the needs for sewer pipe assessment in the United States.

In addition to standardizing TV inspection codes, the PACP will also include User Certification and tools for data integration and mapping. A summary of the PACP is as follows:

Development of Standard Codes – The existing WRc Manual of Sewer Condition and Classification Third Edition will be updated to include better assessment of corrosion, maintenance related problems, and a new category of features and defects relating to rehabilitation/renewal of existing sewers.

Training and Certification of Users – A crucial part of any assessment program is the thorough indoctrination of Users to the various codes and assurance the codes are implemented correctly. Each student who successfully completes the training will be assigned a certification number that will become part of any assessment the User provides, helping to insure confidence in the TV assessment data. This certification can be used as a requirement by Municipalities in their specifications. This will insure the nationwide use of the data.

Standard PACP Data Format – A data dictionary will be developed that will define fields, formatting, and valid entries. The establishment of a neutral data interchange format will allow data from different applications to be exchanged and appended without use of proprietary conversion scripts.

Certification of Software Vendors – NASSCO certification of software will assure the Owner that the software properly utilizes the PACP codes and the software has the ability to export descriptive data to the Standard PACP Data Format.

Mapping Symbology Standards – GIS is a very useful tool in conveying information about sewer system condition. The PACP Mapping Symbology Standards will establish color and linetype for use in mapping basic parameters such as diameter, pipe material, depth, and condition rating.

Condition Ratings – Algorithms and weighting factors are used to convert the descriptive data developed from the PACP codes into general categories of pipe condition that will focus attention on the sewer segments that need further evaluation and consideration for renewal or replacement.

Other industries much larger than ours have recognized the benefits of standardization far outweigh any competitive advantage offered by a proprietary approach. Standardization will greatly improve productivity, allow the integration of TV data from many sources, and reduce the subjective nature of describing features and defects that often exists today.

The lack of standards in the United States has made the understanding of how pipes deteriorate and why they deteriorate problematic. Sorely missing in the wastewater collection system industry is the ability to benchmark sewer pipe condition. If different coding systems are used within a particular utility it is quite possible that comparing the condition of adjoining sewer segments would be impractical because you cannot compare apples with oranges. However, if we adopt standard codes and data management practices, we can not only benchmark sewer pipe conditions within a utility, we can also compare sewer pipe conditions from one time frame to another and from one utility to another.

The PACP database will also provide a source for development of preventive maintenance work activities and recurrence intervals based on the amount of debris, roots, or grease found during inspection. Decision matrices can also be created that help to select possible types of renewal based on the PACP data. More reliable and more consistent data will result in more favorable construction prices to Owners by reducing the amount of unknowns contractors will anticipate. The comprehensive PACP database will also prove useful during implementation of new initiatives such as C-MOM and GASB-34.