

Pipeline Assessment Certification Program

*Andrew W. Merical
Pipeline Data Management, Inc.
Des Moines, Iowa
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In 2001, the National Association of Sewer Service Companies (NASSCO) started the Pipeline Assessment Certification Program (PACP) to standardize the way information is gathered and reported from sewer inspections with closed circuit television cameras.

NASSCO collaborated with the Wastewater Research Centre (WRc) to develop PACP standards. The WRc is a technology based consulting group that has provided services to the European wastewater industry for over seventy-five years. The WRc developed a coding system many years ago that became the norm in much of Europe. However, since some American engineering terms and wastewater system designs differ from those in Europe, NASSCO had to adapt the coding system to meet American assessment needs more effectively.

The resultant PACP coding system enables contractors, owners and consultants to communicate in standardized terms to successfully catalog inspection observations and make assessments in the US. In addition to standardizing pipeline video inspection codes, the PACP also includes a user training and certification program and tools for data integration and mapping.

The PACP has several elements that comprise a comprehensive approach to standardization:

- **Standard Codes** – These descriptions limit observations to defined terms that universally express pipe structural condition quantitatively.
- **User Training and Certification** – Training and education assures correct implementation of the standard codes. The training program gives every person who earns certification an identification number that they include in any assessment they provide. This helps guarantee the integrity of the video inspection assessment and can be required in public bid specifications for contractors.
- **Standard PACP Data Format** – A data dictionary defines field, formatting and valid entries. By using a neutral data interchange format, the program appends and exchanges data from different applications without the use of proprietary conversion scripts.
- **Certification of Software Vendors** – NASSCO software certification assures owners that the software properly utilizes the PACP codes and has the ability to export descriptive data to the standard PACP data format.
- **Mapping Symbology Standards** – The PACP mapping symbology standards establish color and line type for use in mapping basic GIS 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. This information can focus attention on sewer segments that need further evaluation and consideration for renewal or replacement.

PACP has a surprising number of valuable applications. For one, by adopting PACP in wastewater projects, sewer pipe conditions within a utility can be benchmarked and compared from one time frame to another and from one utility to another. In addition, PACP provides a method to develop preventative maintenance work activities and recurrence intervals based on the amount of debris, roots or grease found during inspection. It also allows users to create decision matrices to determine the best types of rehabilitation based on PACP data, and can help contractors reduce the unknowns in formulating bids and thus reduce project prices. Finally, it can facilitate the implementation of new initiatives, such as CMOM and GASB-34.