

Coding defects step by step

Good collection system practices require regular inspections and ongoing maintenance. Recording the condition of assets requires a standard set of terms, procedures, and ratings. The Pipeline Assessment & Certification Program (PACP) helps fill this need.

The Defect Detective series provides an introduction to PACP and offers the opportunity to put your defect detective skills to the test.

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The PACP Inspection Form is broken down into two sections: The Header Section and the Details Section. This month's installment will review the Details Section of the PACP inspection form as well as the standard defect codes used to start or complete an inspection. You will learn how to populate each column to get the most use from the program.

The Details Section of the inspection form (shown below) is used to enter observations and defects encountered or observed in the pipeline. Note that PACP

considers a segment as the pipe between two access points (usually manholes), and that each segment of pipe must have its own inspection form. If a reverse setup is required because of a blockage in the pipe, a new inspection form also is required.

Initial coding

All PACP inspections begin with two consecutive codes entered at distance 0.0. The Access Point Code – such as a manhole, coded AMH – marks where the survey begins, and the Water Level Code (coded MWL) ensures the water level (depth) is recorded for, at least, one location along the pipe segment. Other access points include catch basins (ACB), cleanouts (ACO), and discharge points (ADP). An access point ID is always entered in the remarks column.

MWL records the water level at the beginning of the survey and any significant changes during the survey. This code also requires a percentage of the water level (compared to height of the pipe) be entered in the % section of the Value column.

Defect coding

The findings of the inspection itself

populate the rows between the initial and final coding. Each row notes a single defect or observation, and the columns are used to enter data related to that specific defect. Note that specific columns are completed depending on the code used. A description of each column is listed below.

Final coding

Upon reaching the finish access point, users enter the appropriate Access Point Code with the access point reference in the Remarks column. If a survey has to be abandoned, the Survey Abandoned Code (MSA) must be used. Under no circumstances should any observation or PACP codes of any kind be added to the rows following a survey ending with an Access Point Code or Survey Abandoned Code.

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Details Section of the PACP inspection form

| Distance (feet) (meters) 1 | Video Ref. 2 | Code Group/Descriptor/Modifier 3 | Continuous Defect 4 | Value 5 | | | Joint 6 | Circumferential Location | | Image Ref. 8 | Remarks 9 |
|-------------------------------|-----------------|--|------------------------|-----------|-----|---|------------|--------------------------|----|-----------------|--------------|
| | | | | Dimension | | % | | At/From 7 | To | | |
| | | | | 1st | 2nd | | | | | | |
| 0.0 | | AMH | | | | | | | | 30-1534 | |
| 0.0 | | MWL | | | 20 | | | | | | |

- 1 **Distance** – List the distance from the starting access point to the observation in feet to one decimal point (or meters to two decimal points).
- 2 **Video Reference** – A reference number for the user (or the software) to relate the observation to a specific location.
- 3 **Code** – The PACP Observation or Defect code.
- 4 **Continuous Defect** – Continuous defects, such as grease or roots, occur over a length of pipe or recur at regular intervals. This column is used to start and stop such defects to simplify and limit the number of codes cataloged.
- 5 **Value** – Used to record various dimensions associated with some of the PACP codes (such as MWL mentioned above).
- 6 **Joint** – J is entered when part of a defect is at or near a joint.
- 7 **Circumferential Location** – Clock positions can be entered to specify the location of certain defects.
- 8 **Image Reference** – Records the image name or number relating to a specific code.
- 9 **Remarks** – Used to record details, such as the access point ID shown above, and simple explanations related to a particular code.