

Categorizing codes and putting it to use

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.

In PACP, there are families of defect codes. They include structural defects, operations and maintenance defects, construction features, and header form fields. A fifth family, miscellaneous features, captures various features and conditions that are not associated with the other four families of codes. A full color-coded chart of the codes can be downloaded from the NASSCO website at, <http://bit.ly/NASSCO-codes>.

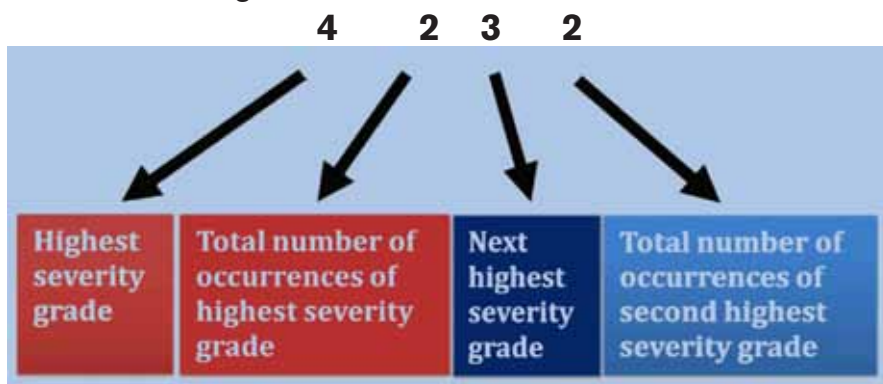
Each defect code also receives a condition grade ranging from 1 to 5 – 1 represents the most minor and 5 represents the most severe. Grades are assigned based on criteria such as

- significance of the defect,
- extent of damage,
- percentage of restriction to flow capacity, or
- amount of wall loss due to deterioration.

The PACP Condition Grading System provides a framework to calculate several pipe rating numbers. This system helps rank line segments based on severity of observed defects and conditions. The pipe ratings are based on the number of occurrences for each condition grade within individual line segments and are separately calculated for structural and operations and maintenance defects.

While condition grades and pipe ratings are based on established criteria, they cannot address every factor associated with every defect. While they can be used as an effective screening mechanism, they should never replace good engineering judgment.

PACP Quick Rating



Quick Rating System

The PACP Quick Rating is a shorthand way of expressing how many times the two highest-severity grades appear in a pipe segment. The quick rating is a four-character score. The figure (above) shows what each number of the quick rating represents. In practice, a quick rating beginning with a 1 or 2 – meaning the highest severity is relatively low – indicates an overall good condition. A quick rating beginning with a 4 or 5 would indicate a

pipe segment that could use some attention.

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Code the defect

Now it's your turn to use the PACP system. Examine the image and answer the questions below.

1. What code should be assigned to this structural defect?
2. This defect is either Grade 3 (fair; moderate) or Grade 4 (poor; will require attention soon). Which condition grade should be associated with this defect?
3. What quick rating should this segment receive? (Assume the pictured defect is the most severe structural defect and four other defects existed with a condition of Grade 3.)
4. What are the rehabilitation options for this segment of pipe?



The answers to these questions will appear in the October 2016 installment of Defect Detective.