



PACP Re-Certification Syllabus

Pipeline Assessment & Certification Program (PACP®) Version 7.0.4
User Recertification Course

Required Texts

Pipeline Assessment & Certification Manual- provided by NASSCO through a certified trainer. Updates to the manual can be found by logging in to the members section of www.nassco.org.

Course Goals

The goal of the NASSCO PACP User Recertification course is to provide a thorough review of the PACP coding procedures and best practices, provide an opportunity for users to update to current PACP changes and additions, provide contractors a mechanism to test operators' skills, and commitment to ensure quality PACP coding.

Course Activities

Presentation of modules
Course Review
Multiple Choice/Open Book Test

Course Schedule

1. Module 0 – PACP Overview
(Preface and Introduction of the PACP Reference Manual), *estimated time 45 minutes*
 - A. Course Content
 - B. Introduction to NASSCO
 - C. NASSCO Website
 - D. Overview of PACP Manual

2. Module 1 – Introduction and Need for Condition Categorization
(Section 1 of the PACP Reference Manual), *estimated time 45 minutes*
 - A. PACP® Overview
 - B. Origin of Condition Codes
 - C. Reasons for TV Inspection
 - D. How We Use TV Inspection Data
 - E. Why Standardization is Important
 - F. General Approach to TV Using the PACP®
 - G. Supplemental Technologies

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- H. Background to Technical Issues
 - i. Deterioration Mechanisms
 - I. PACP Inspection Form
 - J. PACP Inspection Deliverables
 - K. Clay Pipe Video
3. Module 2 – PACP Header Section (Section 2 of the PACP Reference Manual), *estimated time 30 minutes*
- A. PACP Inspection Form Header Section Instructions
 - B. General Guidelines When Completing CCTV Inspection Form Header Section
 - C. CCTV Inspection Header Information
4. Module 3 – PACP Details Section (Section 3 of the PACP Reference Manual), *estimated time 45 minutes*
- A. PACP Inspection Form Details Section
 - B. Initial Coding
 - C. Final Coding
 - D. Column Entries
 - E. Sample PACP Inspection Form
5. Module 4 – Structural Defect Coding (Section 4 of the PACP Reference Manual), *estimated time 1.5 hours*
- A. Crack (C)
 - B. Fracture (F)
 - C. Broken (B)
 - D. Hole (H)
 - E. Deformed (D)
 - i. Rigid Pipe
 - ii. Flexible Pipe
 - iii. Brick
 - F. Collapsed (X)
 - G. Joint (J)
 - H. Surface Damage (S)
 - I. Lining Features (LF)
 - J. Weld Failure (WF)
 - K. Point Repair (RP)
 - L. Brickwork
6. Module 5 – O&M Defect Coding
(Section 5 of the PACP Reference Manual), *estimated time 45 minutes*
- A. Deposits (D)
 - B. Roots (R)
 - C. Infiltration (I)
 - D. Obstacles/Obstructions (OB)

- E. Vermin (V)
 - F. Testing and Grouting (G)
 - i. Mainline Packer Video
 - ii. Packer Liner Extended Video
7. Module 6 – Construction Features Coding (Section 6 of the PACP Reference Manual), *estimated time 30 minutes*
- A. Tap (T)
 - B. Intruding Sealing Material (IS)
 - C. Line (Direction/Alignment of the Sewer) (L)
 - D. Access Points (A)
8. Module 7 - Miscellaneous Features Coding (Section 7 of the PACP Reference Manual), *estimated time 30 minutes*
- A. General features and defects that are not described by or included in other PACP categories
 - i. Used to record features' special observations
9. Module 10 - Appendices, *estimated time 30 minutes*
- A. Appendix A – Code List
 - B. Appendix B – Color Coded Chary
 - C. Appendix C – PACP® Condition Grading System
10. Course Review (including Jeopardy), *estimated time 30 minutes*
11. Multiple Choice Test, *estimated time 1.0 hour*

Grading

Each student will be expected to get at least 85% of the questions asked correct in order to become recertified. If the target is not met, every effort will be made to help the student grasp the information and retake the test.

Estimated classroom time: 7.0 hours

Testing: 1.0 hour

Total PACP Recertification Time: 8 hours



LACP Class Syllabus

Lateral Assessment and Certification Program (LACP™) Version 7.0.4

Required Texts

Pipeline Assessment & Certification Manual- provided by NASSCO through a certified trainer. Updates to the manual can be found by logging in to www.nassco.org

Suggested Reference

Manual of Sewer Condition Classifications- WRc. Available for purchase at www.nassco.org

Course Goals

LACP - The goal of the LACP is to provide the student, who is familiar with PACP as a certified User, with a complete understanding of how the PACP codes have been adapted to provide critical data on the conditions found in laterals. The course presents many opportunities for the student to ask questions about the new codes specifically required for proper use of the LACP.

Course Activities

Presentation of Modules
Course Review
Multiple Choice/Open Book Test

Course Schedule

1. Introduction and Overview of Lateral Sewer Assessment, *estimated time 30 minutes*
 - A. Lateral Assessment Certification Program (LACP)
 - B. Lateral Configurations
 - C. Examples of Lateral Inspections
 - D. General Approach to CCTV Inspection Using the LACP
 - E. General Rules for Coding Observations/Defects

2. Lateral Inspection Form Header Section, *estimated time 1 hour*
 - A. LACP Header Section
 - B. LACP Header Fields

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3. LACP Inspection Form Details Section, *estimated time 1 hour*
 - A. Continuous Defect Coding
 - B. Structural Defects
 - C. Operation and Maintenance Features
 - D. Construction Features
 - i. Access Points (A)
 - ii. Fittings (F)
4. Course Review, *estimated time 30 minutes*
5. Multiple Choice Test, *estimated time 30 minutes*

Grading

Each student will be expected to get at least 85% of the questions asked correct in order to become certified. If the target is not met, every effort will be made to help the student grasp the information and retake the test.

Total Course Time: 3.5 hours



MACP Class Syllabus

Manhole Assessment and Certification Program (MACP™) Version 7.0.4

Required Texts

Pipeline Assessment & Certification Manual- provided by NASSCO through a certified trainer. Updates to the manual can be found by logging in to www.nassco.org

Suggested Reference

Manual of Sewer Condition Classifications- WRc. Available for purchase at www.nassco.org

Course Goals

MACP - The goal of the MACP is to provide the student a thorough understanding of the procedures required to perform an appropriate inspection of manholes and other access points on all components that make up these structures.

Course Activities

Presentation of Modules
Course Review
Multiple Choice/Open Book Test

Course Schedule

1. Introduction to Manhole Condition Assessment, *estimated time 45 minutes*
 - A. Manhole Assessment Certification Program (MACP)
 - i. Overview
 - ii. MACP Inspection Form
 - iii. Levels
 - iv. Photographs
 - B. Manhole Component Descriptions
 - i. Cover
 - ii. Frame
 - iii. Chimney
 - iv. Cone
 - v. Wall

- vi. Bench
 - vii. Channel
 - viii. Pipe Connections
2. Manhole Inspection Header Section and Component Observation, *estimated time 1.75 hours*
 - A. Header Section Instructions
 - B. Component Observation Section Instructions
 3. Manhole Component Defect Section, *estimated time 1 hour*
 - A. PACP Defect Codes
 - B. Manhole Component Section
 - C. Chimney Defect Condition Inspection
 - D. Cone Defect Condition Inspection
 - E. Wall Defect Condition Inspection
 - F. Bench Defect Condition Inspection
 - G. Channel Defect Condition Inspection
 - H. Sample MACP Inspection Form
 4. Course Review, *estimated time 30 minutes*
 5. Multiple Choice Test, *estimated time 30 minutes*

Grading

Each student will be expected to get at least 85% of the questions asked correct in order to become certified. If the target is not met, every effort will be made to help the student grasp the information and retake the test.

Total Course Time: 4.5 hours