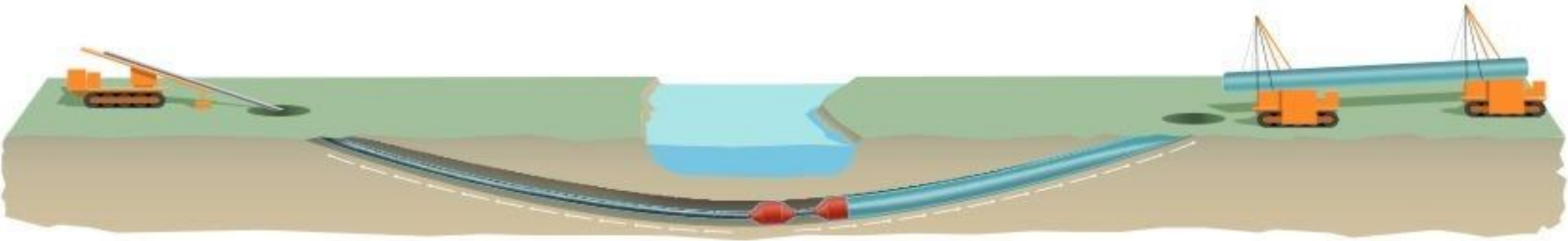




Trenchless Technology Guidance

Environmental Considerations for the Construction and Operation of Trenchless Technology



Pennsylvania Department of Environmental Protection
Bureau of Waterways Engineering & Wetlands
Division of Wetlands Encroachments and Training

Water Resources Advisory Committee
January 18, 2024

Background

- Trenchless methods are often chosen by the applicant as the least environmentally impactful alternative.
- This guidance outlines the steps and options to be considered when the use of a trenchless technology construction methodology is proposed.
- Trenchless technology is not specifically referenced in regulation. This guidance provides recommendations for the use of this construction method that would meet relevant Department regulations.

Background

- Detailed guidance has not previously been developed for trenchless methods.
- The level of analysis recommended by this guidance is expected to be commensurate with the level of environmental risk.
- Furthers the Department's development of more formalized guidance on pipeline construction.

Background

- Provides consistency for both the regulated community and the review staff on the appropriate level of due diligence recommended for trenchless technology.
- Much of this guidance includes information that the Department has asked for in the past when evaluating trenchless methods.
- Many operators are now providing more analysis when proposing trenchless methods.

Background

- Stakeholder Workgroup (January – July 2019)
 - Stakeholder comments incorporated into Draft document
- After DEP reviews and edits, draft document was published for public comment on March 19, 2022, for a 60-day public comment period
- Received 143 unique comments from 150 public commenters

Changes: Draft to Final

- DEP has reviewed and considered all public comments
- Evaluated sections and performed some reorganizing to enhance readability
- Provided both industry-specific and general guidance

▶ Highlights of Changes: Draft to Final

- Clarifying edits including when it is appropriate to use a Pennsylvania-licensed PE and/or PG;
- Additions to the recommended analyte list
- Removal of the HDD flow chart to clear up ambiguity and consistency with the rest of the document
- Addition of new risk factors to more accurately assess risk
- Updates to definitions

➤ Supplemental Information and Appendices

- Stakeholder draft had several appendices

Appendices

A. Trenchless Technology Risk Evaluation

~~B. Data Resource List~~

~~C. Bore & HDD Flowchart~~

~~D. Instructions for Determining Public Water Supply Source Locations using eMapPA~~

~~E. Example Template for a PPC Plan~~

~~F. Example Notification Letter and Well Construction Questionnaire~~

~~G. Example of Standard Boring Log~~

~~H. Example letter conveying water quality results and notification of EPA Maximum Contaminant Level (MCL) exceedances~~

I. Technical Guidance Document – Plan Submittal Checklist

▶ Supplemental Information and Appendices

- The published Draft TGD had two appendices, which will be the same appendices appearing in the Final TGD.
- No substantive changes were made to these appendices from proposed to final.

Appendices

A. Trenchless Technology Risk Evaluation

B. Technical Guidance Document – Plan Submittal Checklist

Risk Assessment

1. Will drilling fluids be used under pressure?
2. Are you crossing under an aquatic resource
3. PNDI receipt show any threats to T&E species?
4. Are portions of the trenchless technology project located within a Zone II wellhead protection area of a Public Water System groundwater source or within a 1,000-foot radius of a potable groundwater source?
5. Are portions of the trenchless technology project located within a 2-mile radius of a Public Water System surface water intake?
6. Any evidence of contamination (e.g., USTs, Brownfield, presence of monitoring wells, etc.)?
7. Activity in steep slopes?
8. Activity in questionable geology (e.g., mines, faults, karst, etc.)?
9. Activity occurring with significant elevation difference between entry and exit?

Risk Assessment

- Risk assessment is a tool to help evaluate risk.
- Risk assessment provides clear guidance when the Department recommends a more in-depth analysis on any proposed trenchless methods.
- Level of analysis should be commensurate with the size and scope of the project and level of risk.
- Allows for discretion between a pipeline with several crossings vs. fiber optic in all uplands

Questions or Comments?

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