



Training Outline - Operational Risk Assessment

Instruction time - 180 minutes (3.0 hours)

Summary

Developing an approach to operational risk assessment is critical to managing wastewater operations. This training will define an approach to developing a risk matrix for evaluating wastewater systems. Attendees will be instructed on how to define a wastewater system, its level of service, and criticality. Then they will learn how to assign likelihood of operational failure and triggers for taking action. Attendees will participate in completing an operational risk assessment utilizing this approach on a wastewater system.

The intent of this training is to inform operators on how system risk can be used to make decisions and communicate system status.

Outline

Introduction

Training Goals and Objectives (5 min)

- Understand how to define systems in a wastewater system
- Highlight the importance of condition assessment, operating procedures, reliability, and redundancy.
- How to incorporate capacity, utilization, obsolescence, and cost into risk assessment.
- Understand how to establish and evaluate wastewater system risk.

System Definition (25 min)

- Wastewater system overview
- Tools for creating an asset inventory
- Developing a system hierarchy
- Examples of wastewater systems

Level of Service (30 min)

- Understanding criticality
- Compliance with permits and regulations
- Service Reliability
- Disruption to community/public image
- Ability to return asset to service
- Financial impact on the utility



Operational Risk Assessment, cont.

Factors effecting asset failure (30 min)

- Condition assessment
- Effective operating protocols
- Reliability
- Planned redundancy

Triggers for acting (10 min)

- Capacity and utilization
- Obsolesce
- Operating and maintenance cost

Break (10 min)

Wastewater system risk assessment tool (65 min)

- Introduction
- Assigning weight criteria
- System scoring
- Identify wastewater system
- Group wastewater systems to be evaluated
- Evaluate systems and assign scores
- Review and discuss results

How to utilize results (15 min)

- Operational strategies
- Prioritizing maintenance, repair, and refurbishment
- Facility and regulatory planning

Training Summary (10 min)

- Review of learning concepts
- Questions and answers