

Pump Station Operation & Maintenance Workshop

Training-In-A-Box

Workshop Learning Outcomes:

- Pump Station Design & Pump Curves
 - Ability to select a pump or provide guidance to the engineer selecting a pump either like-for-like or to accommodate capacity changes
 - How to determine pressure and flow ranges
 - How to read a pump curve
- Alternative Standby Power
 - Practical potential for alternative power sources
 - Basic decision making about generator selection including location, fuel source
 - Importance of exercising a generator
 - Sample maintenance checklists
- Generators
 - How to size a generator or what information is needed by the engineer to properly size (and not over-size) a standby generator.
 - Information regarding the auxiliary equipment associated with standby or emergency generators including: automatic transfer switches, fuel tanks, day tanks, fuel polishing, load banks.
- Pump Station Control & Telemetry –
 - Types of telemetry used in pump stations (which are mostly remotely operated)
 - The difference between analog vs digital signals and how each is best used
 - How to upgrading legacy control systems when adding new equipment or systems or replacing control systems that can no longer be maintained.
- Vibration Analysis
 - Why vibration monitoring is important for rotating equipment
 - What is the natural frequency of the equipment and structure
 - The importance of appropriate foundations
 - How misalignment of pipes can contribute to vibration
- Pump Seals
 - The different types of seal and packing
 - Appropriate reasons and locations for using each type.
- Pump Station Inspection
 - The importance of regular inspections and getting to know the characteristics of the equipment
 - How to use checklists to monitor pump station operation and predict maintenance requirements
- E-O&M Manuals –
 - Walk through the pros and cons of creating and using electronic operation and maintenance manuals
 - What is required by the state for O&M manuals
 - What do operators need from O&M manuals