

Force Mains Issues  
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This subject material for this session will examine the design considerations that should be made for complex forcemain systems. Complex forcemain systems are defined as those that have multiple intermediate high points, as may be encountered in on-site wastewater systems where the nitrification field is remote from the pump tank. There will be a review of system head curves, graphical pump selection, and hydraulic grade lines for simple pump systems. These principles and practices will then be applied to complex system examples.

There will also be a brief discussion of air-vacuum relief and air release valves, and the proper application of these valves. The final topic will thrust block requirements for forcemain fittings, as applicable for the sizes and pressures typically found in on-site wastewater systems.