



# MUNICIPAL WATER TREATMENT STRATEGIES

## Considerations:

1. The quality of your water source
2. Flow rate, flow patterns, storage capacity
3. Pressurized or gravity inflow and outflow
4. Federal, State and Local water and wastewater regulations
5. Staff availability, safety considerations
6. Available budget, chemical availability

## Typical Solutions:

1. For a large plant exceeding, 1 MGD, staffed 24/7, with a community well field and high quality water source:
  - a) Submersible well pump to sand filter
  - b) Sand filter to clarifier
  - c) Chemical treatment in clarifier for pH adjustment and suspend solids removal
  - d) Gas chlorine added following clarifier, prior to pressurized storage tanks
  - e) To distribution, minimum chlorine residual of .5ppm
2. For a large plant exceeding 1 MGD, staffed 24/7, with a surface water source:
  - a) Water inlet by pump or gravity to prechlorination using gas chlorine
  - b) Primary chlorine contact tank
  - c) Pump or gravity flow through a sand filter
  - d) Sand filter to clarifier
  - e) Chemical treatment for pH adjustment and suspended solids reduction
  - f) Secondary chlorination using gas chlorine, prior to pressurized storage tanks
  - g) To distribution, minimum chlorine residual of .5ppm
3. For a plant less than 1 MGD or any facility not continually staffed:
  - a) Water inlet from well, borehole, or surface water via pump or gravity
  - b) Primary settling tank
  - c) Pump or gravity through a sand filter
  - d) Secondary clarifier and pH adjustment or chemical treatment for suspended solids removal
  - e) Pump or gravity flow from clarifier through Bio-Dynamic tablet feeder filled with Bio-Sanitizer disinfecting tablets into non-pressurized storage tank
  - f) Pump to pressurized storage tank for distribution, minimum chlorine residual of .5ppm