Proper System Flushing
Is your plant compromised?
Without a proper flush, or cleaning, we take a SIGNIFICANT chance of damage and lack of efficiency. Energy savings lost!
• Any proper flush operation includes moving water at a high flow velocity. Chemical Passivation and clear water flush.

• “Based on the comment from the mechanical contractor, there is no way they reached the required velocity with a fire hydrant pushing water through a 16” pipe 1700’ long.”
Things that get in the way of Proper **FLUSHING**

- **Hassle to Mechanical Contractor**

- **Specifications all over the map!**
  - Feet per second
  - Passivation Duration
  - Filtration
  - Procedures
  - Bypasses
  - House Pumps

- **Lack of consistency**
• Upgrade & Harden Campus Mechanical Plant

• Place in service a 36” Underground Steel Chill Water line that had been sitting vacant for over a year.

• Flush and Clean @ 5’/sec or 17,000 GPM

• 50 Micron Filtration, Cleaners, leave with Inhibitors
• Expose lines and remove bypass

• Access flush ports
Mobilize HDPE Flush Connections for Supply & Return and complete fusion onsite
• Construct HDPE Flush Connections for Supply & Return

• Install
Install Connections
Install Supply and Return Manifolds
Connect and Prep System
Load 50 Micron Filtration
• Install drain lines and make up water

• Accommodate Personnel Access
• Clear Water Flush
• Filtrate & Passivate 48 Hours
• Filtrate & Clear Water Flush
FLUSHING MEANS & METHODS

• **Clear Water Flush** – 5 - 7 ft/sec  
  50 micron filtration – 1 hour

• **Cleaning & Chemical Passivation** – 3 – 5 ft/sec ... 24 to 48 hours

• **Final Clear Water Flush** – dilute the cleaning chemicals out and use 5 micron filtration – tested complete

NASA Mission Control  
Houston, Texas
Patent Pending - Self Contained Flush Unit – Class 601
TENAS A&M UNIVERSITY
STUDENT APARTMENT COMPLEX CONNECTED TO PLANT

• 3 separate units

• Hot & Chill Water Combined

• 6" & 8" Steel

• Aquatherm piping

• 5' ft/sec – 24 Hours

• Class 402 with Hose Connections
• 6" HDPE Connections

• Dual 21k Frac Tanks-Water Batteries

• Class 601 Flush Unit
If the train has left the station

- Evaluate what is in your central plant
- Plant does not have to go off line
- Test with side stream filtration and/or leave in place
- Insure future flushes are done on new connections

Results
- reduce maintenance costs
- energy savings
- lengthen equipment life cycle
Questions

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The End