



## PumpTech Pipeline

Serving the Pacific Northwest—Providing Knowledgeable Solutions



Bellevue, WA - 888-644-6686 \* Canby, OR - 503-659-6230

Moses Lake, WA - 509-766-6330 \* Boise, ID - 208-353-7688

### 2017 Pumping Industry Market Outlook

*By Nick Ringstad, Engineer, Salesman & Publisher*

How would you characterize your work during 2016? My guess is it is similar to what we experienced here at PumpTech; lots of design work, little construction and bid work. While this market condition can make you feel like you're doing a lot of work for nothing, it bodes well for the future. And, we feel that future is now.

At PumpTech, we are already seeing a near equal number of projects going to bid in just the first three months of the year, than nearly all of last year. Pump station and treatment plant projects that seemed to have been shelved for many months have been brought back to life. Pump station design seems to be moving quicker than historical trends. In general, the urgency with which projects are going out for bid appears to be higher.

The state of our infrastructure seems to be weighing heavier on everyone's mind, and the critical need to update their facilities before a catastrophe occurs.

What are the drivers for our market for 2017? Is it increasing regulations? The significant population growth that we're all seeing and feeling in the greater Pacific Northwest? Technological innovation? Changing consumer demands and lifestyles? Presidential election? The aging workforce in the larger Architecture, Engineering and Construction (AEC) industry? I believe it is all of the above.



### Recent Projects

[www.PumpTechnw.com](http://www.PumpTechnw.com)

- **City of Canby, OR**  
United Blower air blower.
- **Nehalem Bay Wastewater Agency** Vaughan Dry Pit Chopper Pumps
- **City of Portland, OR**  
Peerless Pump emergency water booster
- **San Juan Islands / Blakely Island** PACO Intake pump, flow control valve, flowmeter
- **Lakehaven Utility District**  
Well 23 well alignment and pump fit survey
- **City of Burlington, WA**  
Hydromatic submersible sewage pumps
- **City of Bellevue, WA**  
Peerless Split-case water booster pumps
- **Tacoma Paper Mill**  
MagnaDrive 21.0 FGC Coupling barge water pump
- **Milk Processor Chehalis**  
Vaughan Chopper Vertical Wet Pit Pumps
- **Aircraft Manufacturer Seattle**  
Peerless boiler feed water pumps
- **Oil Refinery, Anacortes, WA**  
Abel pump for oil tanker unloading dock
- **City of Coeur 'D Alene, ID**  
ABS/Sulzer High Speed Turbo Blowers
- **City of Post Falls, ID**  
Lonza Constant Chlor Water Disinfection
- **Asotin County PUD**  
Denora Chlortec Onsite Hypochlorite Generation
- **City of Wall Walla, WA**  
SmartCover Systems I/I, Manhole water level monitoring
- **City of Pullman, WA**  
Metropolitan Air-Gap Packaged Pump Station
- **City of Newport, WA**  
Grundfos SLV sewage pumps
- **City of Salem, OR**  
Air-Gap Pump System
- **Eugene Water Electric Board**  
Cornell Pumps
- **S. Suburban Sanitation District** Smartcover, I/I, Manhole water level monitoring
- **Joint Base Lewis-McChord**  
Vaughan submersible chopper pumps
- **City of Lacey**  
Vaughan submersible chopper pumps
- **City of Tumwater**  
PumpTech model #435 packaged pump station

## 2017 Pumping Industry Market Outlook cont.

### Regulation

Regulations for cleaner water and treatment and conveyance of wastewater along with requirements to improve efficiency and lower energy use, is creating a demand for smart variable speed pumping systems. In the future we see the United States adopting some of the more stringent regulations that are presently in Europe along with adopting some of the more technologically advanced products that improve efficiency and lower the operating costs such as the proven technology of magnetic bearing high speed turbo blowers in treatment plants.

### Population Growth & the Side Effects

The explosion in population in the PNW (as we all can tell from the traffic) is putting a burden on our existing infrastructure and taxing the resources of the water and wastewater districts. An example is the recent incident at the West Point Treatment plant. I expect we will see increased funding from Cities, Counties and the State for improvements for our water and wastewater infrastructure.

*“Population growth [in the PNW] is expected to climb at almost record rates... The existing infrastructure is aged as we are seeing pumps and systems being replaced that were originally sold by Pump-Tech 20 to 30 years ago. ...it is a great time to be in the pump and environmental equipment and services business.”*

- Doug Davidson, President of PumpTech

most pumps and motors will consume over 20 consumers that recognize the purchase cost of capital equipment is often a fraction of the operation and maintenance costs. For example, most pumps and motors will consume over 20 times the purchase price in energy over their life. Combine that with reliability and the cost of downtime, engineers and owners now look at total life cycle costs to justify sole sourcing robust, efficient and reliable equipment.

### Changing Consumer Preferences and Lifestyles

The increasing use of disposable products such as wipes and swiffers, has put a huge burden on wastewater collection personnel. Pump stations that were relatively reliable for 15 to 20 years are now clogging on a monthly, and sometimes weekly or daily basis because of these new wastewater characteristics. This opens up opportunities for replacing the older style pumps with new pumps containing specifically designed impellers and volutes designed to handle the disposable products without clogging, improve efficiency and reliability

### Technological Innovation

We are seeing increased focus on Total Life Cycle costs as part of purchasing decisions. For years, many have focused on just the purchase cost. This resulted in equipment that owners received under the low bid process and thus have had to live with equipment that burdens them with maintenance and reliability issues. We are seeing increasingly educated consumers that recognize the purchase cost of capital equipment is often a fraction of the operation and maintenance costs. For example, times the purchase price in energy over their

### Presidential Election

Now that the election is over, it's time get back to work and economic forces are improving. If the country could just get over the bickering and start working together it would be amazing what we could all accomplish together. With an emphasis on improving our infrastructure we should see increasing Federal dollars available for more projects. Roads and Light rail create the need for both water, storm and sewage lift stations, as well as odor control.

(Cont. on page 3)

## 2017 Pumping Industry Market Outlook Continued

### **Knowledge Transfer**

Passing on years, if not decades, of knowledge, no matter what profession or industry you're in, is a difficult task. For the pumping industry, where will the next generation of leaders and pump domain experts come from? A civil engineering undergraduate curriculum typically only offers one, maybe two or three 8-10 weeks courses on mechanical, rotating equipment and hydraulic engineering. This barely scratches the surface. A pumping equipment professional is tasked with learning, understanding and communicating a massive amount of information to his constituents. PumpTech realized this generational challenge some time ago and has taken steps to begin that transfer of knowledge, in an effort maintain the high level expertise and service.

Continuing educational webinars, manufacturer trainings, QA/QC meetings, in-house technical discussions are just a few ways PumpTech is achieving this.

It is an exciting time to be involved in the water and wastewater pumping equipment market. With leading higher education institutions, technology companies flocking to our area and a high quality of life, the PNW is poised for very attractive long term economic growth. As the next generation of infrastructure investments appear set to take place, be sure to reach out to your local PumpTech sales engineer on your next pumping equipment-related project to reduce risk and increase your project's opportunity of success.



### **PumpTech Participating Events**

4/3-4/5/17 - Eastern Oregon Short School,  
Pendleton, OR

4/18-4/20/17- MSAWWMWEA  
Great Falls, MT

4/24-4/25 - AWWMA  
Anchorage, AK

5/3-5/5/17 - PNWS/AWWA  
Kennewick, WA

5/21-5/24/17 - NIOS  
Moscow, ID

5/24-5/25/17 - WWCPA  
Spokane, WA

6/7/2017 - AWWA W WA Region Short School  
Lynnwood, WA

6/11-6/14/17 - AWWA ACE'17  
Philadelphia, PA

8/22-8/25/17 - OAWU Summer Classic  
Seaside, OR

8/28-8/31/17 - ERWOW Fall Conference  
Tulalip, WA

9/27-9/29/17 - WASWD Fall Conference in  
Wenatchee, WA

9/30-10/4/17- WEFTEC 2017  
Chicago, IL

10/21-10/25/17 - PNCWA  
Vancouver, WA

November 2017 - Pacific Marine Expo  
Seattle, WA



## Project Spotlight City of Prosser, WA Well #5 Replacement

By a show of hands, who here has considered an energy audit on your pumping equipment?

Nah, not worth it?

What if the payback period on that energy upgrade was less than a couple years?

Would you be surprised to hear that the City of Prosser, WA was able to increase their pumping efficiency *and* save money annually for a **single well pump** simply by conducting an energy audit on the City's Well #5?

The City of Prosser, WA engaged Apollo Solutions Group, an energy services company and PumpTech to examine possible improvements to their Well #5 well pump. The City knew they had issues with the pump and its proper operation, but they didn't know how bad it really was. Lack of accurate records from the previous installer, left the City scratching their head as to what to do to improve this well.



Teaming with Apollo, PumpTech's expert field installation crew and design engineers lead the effort to remove the existing 250Hp motor, angle drive and connections, discharge head, column, shafting, complete bowl assembly and cat walk next to the motor.

Upon inspection of the well and existing equipment, it was determined that the City required more capacity to meet future demand. More surprising, however, was that the set depth of the existing well pump was 180ft off!

Using a 35-ton crane truck, PumpTech was able to supply and install a new Peerless 14MC, 5-stage well pump, with a new US/Nidec 300Hp motor, along with discharge head, column and shafting into Well #5. The installation took approximately two days and involved start-up and training from PumpTech's expert technicians.

Six months after completion of the project, the City of Prosser is saving money on a monthly basis, have greatly reduced their risk of disruption to their water distribution system associated with Well #5 and the Peerless pump is running great. Don't leave your water distribution system at jeopardy of disruption or escalating costs due to reduced pumping equipment efficiency or inaccurate records.

Contact PumpTech today to inquire about an energy audit on your pumping equipment.

## Employee Spotlight – Jim Joyce, Process Equipment Specialist

High-speed turbo blowers (HST)  
 Hypochlorite Generation Systems  
 Ultra-Violet Disinfection  
 Equipment  
 Solar-powered tank mixers  
 Diaphragm Pumps  
 Chemical dosing equipment  
 Digester Mixing Systems  
 Grit Classifiers  
 Polymer Blending Systems



This is a short-list of PumpTech's Environmental Product offerings for wastewater treatment plant (WWTP) equipment that Jim Joyce knows like the back of his hands. Jim is head of PumpTech's rapidly growing range of process equipment offerings. With the explosion in population in the PNW in the last five years, wastewater treatment plants are being taxed like never before.

*"Water and wastewater treatment plant operators are facing greater challenges than ever before. On the Water side, increasing state and national regulations and water quality awareness (think Flint, MI) are forcing water treatment plants (WTP) to not only upgrade aging equipment, but also to look at newer, more dynamic treatment options. I am now routinely seeing WTP's with multiple levels of treatment, such as filtration and chemical dosing combined to meet the high standards of water quality we see, and pay for, in the PNW.*

*For wastewater treatment plants (WWTP), changing consumer lifestyles and preferences, have resulted in a very challenging wastewater characterization. One of my customers has termed this the "Silver handle rule"; if I push the silver handle and the waste goes away, or turn the silver handle and water comes out, then nothing is wrong!" Swiffers, flushable wipes, hygiene products and the like, have made life for WWTP operators much more difficult. Operators are being forced to upgrade and replace older wastewater equipment and layer in additional levels of treatment to meet state, federal and National Pollutant Discharge Elimination System (NPDES) regulations." – Jim Joyce*

Jim assists consulting engineers with WTP and WWTP project design across all of the PNW states: Alaska, Washington, Oregon, Idaho and Western Montana.

Here is a smattering of the type and variation of process equipment projects that Jim is currently assisting with design:

- **City of Coeur d'Alene**  
ABS/Sulzer HST blowers
- **City of Renton**  
Grundfos Chemical Dosing pumps
- **City of Port Orchard**  
Vertical Turbine Pumps
- **Alderwood Wastewater Treatment Plant**  
Air Gap systems
- **City of Sequim**  
Vaughan Turbo Mixers
- **City of Ketchikan**  
Hypochlorite Generation System

In addition, Jim regularly holds CEU-approved water and wastewater pumping-related educational training seminars for engineers and end-users looking to expand their knowledge. The seminars are CEU-approved courses through Washington (WA) Department of Ecology (DOE), WA Certification Services and the Oregon Environmental Services Advisory Council (OESAC). The topics range from centrifugal pumping hydraulic basics, vertical turbine pumps 101 to variable speed pump selection, cavitation and net positive suction head (NPSH). These seminars can be tailored to your desired level of intricacy, from beginner-level courses to advanced hydraulic engineering-type sessions. If it is becoming expensive to pay for travel, hotels and food to send your staff to conferences and workshops to fulfill the required and necessary CEU's, then look no further than Jim Joyce at PumpTech.

Jim Joyce has been with PumpTech for over eight years. For the previous 12 years, Jim owned and operated his own primary instrumentation equipment supply business. Subsequently, Jim was a manufacturer's representative for 16 years within the water and wastewater treatment equipment industry. Jim graduated from the University of Washington with a degree in mechanical engineering.

If you are considering a treatment plant upgrade, replacing old, worn-out process equipment, improvements to plant efficiency or designing a new facility, reduce the risk and increase the probability of success of your project by contacting Jim today.

## PumpTech Pipeline - Spring 2017

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