



IWA PIPELINE



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HERE A PUMP, THERE A PUMP



Most people would agree that the land on our Islands is about as flat as anywhere they've seen. Those of us who live here know that a mere foot or two, more or less, in elevation can make a big difference. During the wet summer season, it can make the difference between needing to mow your lawn more frequently or being able to catch the main course for the neighborhood fish-fry from your front porch.

The flat nature of the Islands also has a large impact on IWA's water distribution system that delivers the water to our members' faucets. Unlike many locations, we can't just pump our water to a tank high up on a hill and let gravity do the job of distributing it to our customers. Likewise, structure height legal limitations prohibit us from building the familiar elevated "water towers" that work on a similar principle. Our only option is to pump the water to our members, and that isn't as simple as it sounds. Maintaining a reliable water supply with a pumped system takes a lot of equipment and costs a lot of money.

Perhaps the most obvious challenge involved in pumping water to our members is that it must be done continuously, 24 hours a day, 365 days a year (366 in leap years!). This means that when a pump needs repair, we have to have a spare one sitting there ready to go. And that spare pump also frequently needs to sense that there is a problem and start itself automatically. In addition, the pumps even have to keep working during the "not infrequent" power outages that we sometimes experience, especially during the stormy summer period. And that also has to happen quickly and automatically.

Another challenge to providing a reliable water supply results from the long narrow shape of the Islands. It's a long way from the Sanibel Lighthouse to Lands End in South Seas Plantation on Captiva. A large demand in one area can result in low water pressure in that area, while the rest of the system has no problem at all. So we need to be able to increase water pressure in a single area only.

There is no one solution to these challenges ("challenges" sounds a lot better than "problems"!). First, regarding the need to pump water around the clock every day, we have spare pumps that are installed and ready to go on a moment's notice. The instrumentation on these pumps detects low water pressure, such as that caused by a pump failure, and automatically starts the spare one, restoring pressure to its normal range in a minute or so. We can then repair whatever failed. The same systems also start additional pumps to prevent low pressure during periods of abnormally high water use, such as when the Fire Department is using large amounts of water for fire suppression.

During power failures, instrumentation detects the loss of power and automatically starts a

propane engine driven pump. If water pressure continues to fall even after this first pump starts, other instrumentation then automatically starts additional propane engine driven pumps until pressure is restored. The propane engines driving these pumps are just normal V-8 truck engines which have been modified to run on propane and to automatically change speed to maintain the required water pressure. Of course in the case of a long power failure, we can always start our new diesel generator and then go back to the electric motor driven pumps!

Finally comes the challenge of maintaining pressure throughout the system when the low pressure problem is only in a small isolated area. For that situation we have one main pumping station and three "booster" pump stations located throughout the Islands. The main pumping station is located in the Reverse Osmosis plant at our main office site on Sanibel-Captiva Road near Rabbit Road. At this location we have four pumps, two electric motor driven, one propane engine driven and one with both an electric motor and a propane engine. There are also two 5 million gallon tanks at this main pumping location. During normal operations, this main pumping station provides water to all areas on both islands.

The first booster station is located behind the City Park on Periwinkle Way across from Beachview Country Club. That station is currently being rebuilt and will contain two new propane engine driven pumps and an existing 2 million gallon storage tank. This station serves the east end of Sanibel during periods of high water use. A nearly identical booster station, serving Captiva, is located inside South Seas Plantation. The only difference in this station is that the storage tank only contains 1 million gallons. The final booster station is located on the west end of Sanibel in the Wulfert area off San-Cap Road and serves the middle/west end of Sanibel. This station contains two electric motor driven pumps and one propane engine driven one, along with a 2 million gallon tank.

That's a lot of equipment (11 pumps and 5 water storage tanks) just to be sure the water's there when you open your faucet, and it takes a lot of effort and money to keep everything in reliable working order. And we've not even talked about the 128 miles of underground pipe that ties the pumping systems all together and delivers the water to your house. Maybe that's a good topic for the next *Pipeline* issue!

LET'S GET TECHNICAL!

In most issues of the *Pipeline* we try to include one item on the quality of our water. We hope these items reassure our members that we take the safety of their water supply very seriously.

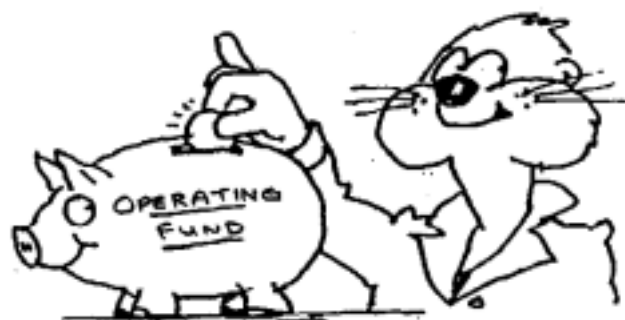
However, from time to time members have suggested that we get "more technical" and give some actual numbers as to quality of our water. We've always provided such data to anyone who asks, but we were concerned that the data might be too technical to include in the *Pipeline*. Well ... someone asked again, so below is a table containing an abbreviated form of the data.

TYPICAL IWA WATER ANALYSIS		
Item	Maximum Allowable Level	IWA Level
Dissolved Solids	500 ppm	411 ppm
Sodium	160 ppm	119 ppm
Chloride	250 ppm	183 ppm
Free Chlorine	0.2 ppm (minimum)	1.2 ppm
Turbidity	5 NTU	0.6 NTU
Asbestos	7 mfl	None
Arsenic	0.05 ppm	None
Mercury	0.002 ppm	None
Cyanide	0.2 ppm	None
Organics	Various	None
Chlorinated Organics	100 ppb	4 ppb

LOWER WATER RATES!

Bet that title got your attention! But unfortunately, we aren't really lowering our rates again. You may recall that we did lower our rates by 7.5% in the Fall of 1994 and they haven't been increased since 1992. And before that, you have to go all the way back to 1981 for the previous increase. We're very proud of our efforts to keep our rates as low as possible, and we're unaware of any other utility who's following our example!

There are many factors that have made it possible for us to keep our rates down. Improvements in Reverse Osmosis membrane technology have helped a lot, allowing us to greatly reduce our electricity costs. But even more importantly, we're constantly looking for ways to do our jobs "smarter" and more productively. We've taken steps in that direction and are now operating with 7 fewer employees than a few years ago. We even implemented an employee suggestion program in which employees can share in the savings from new ideas they develop. But we're starting to run out of ways to further reduce costs.



However, there is one area of increased efficiency that our members can help us with. As mentioned in previous issues of the *Pipeline*, it costs us a lot of money to process monthly water bill payments. As best we can calculate, it costs around 55¢ to process each payment ... and at 3,800 payments per month, that comes to over \$25,000 per year. On the same basis, we're already saving nearly \$3,500 per year on over 500 members who have chosen to use our automatic bill paying option. So, this is **yet another** plea for more members to join this program and to help us save some more of the remaining \$25,000.

We've decided to make it even easier for you to join the program. Normally, you have to contact our office for an application. However, we've printed a copy below that you can just cut out and mail to us (P. O. Box 509, Sanibel) or drop it by our office, thereby eliminating one step in the process.

Please help us keep your rates down and join the automatic payment program! You'll still receive a bill each month in time for you to contact us about any problems before your bank pays the bill on the due date. And you save twelve 32¢ stamps and envelopes, not to mention the aggravation of paying another bill! Rest assured that this is a one-purpose transaction and we will not be able to access your account for any other reason, see the account balance, or anything else.

Thanks!! If you have any questions, just call our offices at (941) 472-1502.

AUTHORIZED AGREEMENT FOR PRE-ARRANGED WATER BILL PAYMENTS

I (We) hereby authorize The Island Water Association, Inc. (IWA) to begin debits to the bank account listed below. I authorize the bank to debit the amount of my monthly water bill. I have the right to stop payment of a charge within seven days of receiving my bill from IWA. I am responsible for notifying both IWA and the bank of this stop-payment request.

This authorization is to remain in effect until I notify IWA in writing of its termination. My notification must allow the bank a reasonable opportunity in which to act on it. Both IWA and the bank may also terminate this agreement with 10 days written notice.

Name (as it appears on your bill):

Social Security or Federal ID number:

Address of water service:

Account number of water service:

Your telephone number:

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Bank name:

Bank account number:

Signature(s):

Date:

Please attach a check with "VOID" across it. Then return with your normal monthly payment check. We'll notify you in advance of when your automatic payment plan begins.

MEET TODD BROWN



Todd Brown Joined IWA on November 4th as a Plant Operator Trainee. Todd replaced Jon Gasaway who transferred to Distribution Department, replacing Art Gibson who recently resigned for a position with the City of Sanibel. Todd comes to us with experience in the U. S. Navy, and more recently, with Pinkertons and Sears.

As a Trainee, Todd will spend the next year or so learning the water treatment business and working on becoming a licensed operator. He has already completed the necessary training courses for his license and now just needs the practical experience.

Todd lives in Fort Myers, where he enjoys fishing boating and attending sporting events. He says that his motto is, "Finish what you start." That attitude should help him pass his licensing tests

next year!

By the way, if you think you may have read this same article before, it's because the last issue of the *Pipeline* featured Ted Brown, also a Trainee (who recently became licensed!).

YES, IT'S US ... SORT OF ...

We've recently received a number of phone calls regarding "guys in orange shirts" digging holes in various right-of-way locations around the Islands. The callers were concerned that they seemed to be working on our water mains, but they didn't look like IWA employees (we don't wear orange!). They're not! But they are working for us.

IWA often subcontracts some of our underground piping construction to outside contractors. Our employees supervise these activities, but frequently on a part-time basis, since we usually have a lot of other work going on at the same time. So our employees are not on every job site 100% of the time.

Currently, Cabana Construction is installing "blow-off" connections at a number of locations around the Islands to enable us to better flush our water mains and keep your water as clean and fresh as possible. This project will continue for several months. They're the guys in the orange shirts, which they wear for safety and visibility on the job.

But anytime you see people whom you don't recognize as IWA employees apparently working on water mains, feel free to give us a call. We don't mind! Occasionally, we discover people working on our equipment who shouldn't be!

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