



IWA PIPELINE



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HERE A PIPE, THERE A PIPE



In recent past editions of the *Pipeline*, we discussed our wells, pumping systems, reverse osmosis treatment plant and brine treatment system. The only remaining parts of IWA's facilities and operations which we have not discussed are our distribution system and our office functions. In this edition, we'll discuss the distribution system, which delivers water to our members' homes. We'll save the office functions for the next edition.

In case you've never noticed, there are none of the familiar elevated "water towers" on our Islands. So we are never going to have to decide whether to tear one down or to make it into a "beautiful landmark" as has recently been hotly debated in Fort Myers. The purpose of this type of water storage facility is to provide a constant pressure in the water distribution system. However, here on the Islands a structure of that height would never be permitted, and rightly so, since it would be a very conspicuous eyesore in our environment. At IWA, our water is stored in five large ground level concrete storage tanks, which although not beautiful, are much less conspicuous than elevated towers. We have 15

million gallons of storage. This represents around 5 days of storage at our average usage rate, less than 4 days during peak season, and hopefully many more days during an emergency, such as recovery from a hurricane. This is much more storage than most other utilities. We believe this is appropriate to ensure that we have an adequate reserve in the event we are hit by a hurricane.

From the tanks, the water is pumped into the distribution piping system by a series of 11 pumps located near the various tanks. These pumps are equipped with instrumentation that varies their speed to keep a constant pressure in the distribution piping system, thereby eliminating the need for elevated water towers. IWA's distribution system consists of **128 miles** of piping, ranging from 1" to 20" in diameter. Most of it is buried approximately 30" below ground level. That's a lot of pipe for two such small islands!! There also are a lot of valves of every size that enable us to isolate a small portion of the system for repairs and/or maintenance, without inconveniencing too many of our members. Wherever possible the system is "looped" so that water can be supplied from more than one direction, again to minimize service disruptions. Looping also maximizes the flow capacity of the system and ensures that the water is kept flowing and fresh for our members' use.

There are several types of piping in IWA's distribution system. The type we have used has varied over the years as technology has evolved. In general, we try to use the most cost effective type of pipe, considering not only the initial installation cost, but also the potential repair costs over the life of the pipe. In all cases, the fittings (elbows, tees, etc.) are cement lined ductile iron, which is a less brittle form of the more common cast iron. These fittings are bolted to the pipe in a variety of ways, all designed to prevent leaks. None-the-less, a great

percentage of our problems occur at these fittings, as is the case with most distribution systems.

The majority of our piping is made of plastic (PVC). Since plastic is very corrosion resistant and maintenance-free and because we do not have a freezing problem, plastic pipe is very common in Florida. However, some of our plastic piping is very old and has a very thin wall which is easily broken. In some cases, we have actually found plastic **electrical conduit** used for water piping, probably because the contractor installing it 20 or 30 years ago didn't know the difference (or found a cheaper solution!). Some of these old plastic pipes are beginning to show their age and they are starting to crack or otherwise fail. Some of the new water line construction you have seen in recent years is the result of our replacing some of this old pipe with new plastic pipe with a much thicker wall and made of better material.

A relatively small portion of our piping (but still many miles!) is made of cement lined ductile iron (the same material as all the fittings). This is excellent pipe and it is nearly indestructible. However, it is very hard to work with and very expensive, so we only use it in situations where repairs would be very expensive (e.g.: under the center of Captiva Drive) or where damage is more likely (e.g.: waterway crossings).

Regardless of the type of pipe, making the connections for the service lines to our members' houses is a challenge (that means high \$). If you picture a water main at say 12" in diameter and how you would make a 1" connection to it, you begin to see the problem. Some utilities just drill and tap the main pipe and thread the smaller pipe right into the larger pipe wall. At IWA, we have found that this method of installation leads to a lot of expensive leaks and failures. Therefore, we use what is known as a saddle to make the connection. A saddle is a stainless steel band that bolts around the main pipe. It has a threaded connection on one side. After the saddle is bolted around the pipe, we then drill-out a hole in the main pipe wall through the middle of the side connection on the saddle and thread the smaller pipe into the side connection. This type of connection is much more secure than direct tapping, and if it later fails, it can be simply (more or less!) repaired or replaced.

An interesting, and little known, aspect of our distribution system is that it not only provides potable water for domestic consumption, it also provides water for fire protection (free to the Fire Districts). Fire hydrants on the Islands are con-

nected to the same water mains as our members' houses. In fact, it is almost always the fire protection flow requirement that determines the size of our pipes. In 1982 there were nearly 1,000 homes on the Islands with inadequate fire protection. These homes were more than 1,000 feet from a hydrant, which is the criteria required by the local Fire Districts. Today, after the investment of several million dollars, all homes on both Islands are protected. The Fire Districts shared in these installation costs by purchasing the hydrants. The water mains were funded by IWA.

Well, now you know all about our distribution piping system. If you'd like to see samples of the various piping types, just stop in our office lobby some day and look at the display on the wall. You can even pick-up the samples and examine them.

Together with our previous articles, we hope you now better understand all the equipment and processes it takes to deliver water to your house. It took a lot of your money to build the system, and we are doing our best to maintain it and keep it in tip-top, reliable working order.

WE ARE REALLY GOOD!!!!



Although you may disagree if you faithfully read every copy of the *Pipeline* (which we hope you do!), we are a very humble group at IWA, but we are really proud of ourselves this time. We have recently received two prestigious awards for excellence in our operations.

First, for the second year in a row, we have received an award from the Florida Department of Environmental Protection for "excellence in water

plant operations and maintenance." Production Supervisor/Chief Plant Operator Phil Noe compiled the extensive information necessary to apply for this award. However, the honor goes to all RO Plant operators. When the agencies regulating our industry honor us with awards, we hope this helps reassure our members that we are providing them with a safe and reliable water supply.

And speaking of water supply, we also recently were honored by receiving the Division One Distribution System Award by the Florida Section of the American Water Works Association. This award is for excellence in the operations and maintenance of our distribution system (see earlier article in this newsletter). This time it was Engineering/Distribution Manager Dick Derowitsch and Administrative Assistant Lori Thompson who compiled the extensive information for the application. The honor belongs to all members of our Distribution Department ... the people who read your meter and repair water main breaks in the middle of the night on Christmas!

WELCOME! WELCOME! WELCOME!



That's three "welcomes," one for each of our new Trainee Operators at the RO Plant. Brandon Henke, Damon Young and Jim Ossanna have joined the IWA team in the last several months. All are now busy working hard on learning the ropes in the plant and preparing to take the test for their "C" Licenses next year.

Brandon joined us on July 2nd after working for the last few years in inventory control for a major

national retailer. Brandon, who has one daughter, Briana, lives in Cape Coral, where he enjoys his hobbies of golf, basketball and traveling.

Damon joined us on October 23rd, after working for a number of years in the overnight package delivery industry. Damon, who recently relocated from New Jersey, lives in Cape Coral, where he enjoys billiards, fishing and many other outdoor activities.

Jim reported for work on November 3rd, after working many years in the restaurant business. He and his wife, Mary, and their three children, John, Mara and Amanda also live in Cape Coral (where else??!!), where Jim enjoys his activities with the Cub Scouts and working on cars.

All three of these men say that they are looking forward to learning new skills at IWA and working with the "old hands" in the plant. We wish them all a long and successful career with us!

WHICH TAX?... IT'S YOUR CHOICE!!!

Some time ago, Sanibel City Council made the decision to expand the City-owned sewer system to provide sewer service to the entire Island. In several meetings during October and November, Council debated the alternatives for funding these sewer system expansions. In the past, 100% of the funding was obtained from fees imposed on those people who would be connecting to the sewer system. This time Council decided, after hearing from many affected sewer customers, to look into other sources of funding. They finally decided that the City would pay 50% of the cost, with the remaining 50% still being paid by those connecting to the system. The next question was, "Where does the City get the money for its 50%?"

After much debate and public input, Council enacted an ordinance to impose new taxes on the other utilities serving the Island (including IWA) for this purpose. However, they also decided that a referendum will be held early next year to give Sanibel citizens the opportunity to select ad valorem taxes instead of utilities taxes. If the ad valorem referendum passes, the utility tax ordinance will be repealed.

While there are many arguments that can be (and were) made in favor of both taxes, the debate seemed to hinge on which was the fairest to the majority of the citizens. Of course fairness is in the eye of the beholder. For this reason, the IWA

Board of Directors has chosen not to take a stand on either taxing alternative. Although the ad valorem alternative would obviously be simpler from IWA's standpoint, neither will seriously impact our operations.

It's your choice. **BE SURE TO VOTE!!**

PARDON OUR TRAFFIC JAMS!!!

We apologize for the traffic jams our construction on Periwinkle way is causing! We've received many "comments" about the project, not all of which are suitable to print, but the most often asked question by far is "Why now?" ... as in "Why now, when season is starting?"

There are many reasons for our timing ... some better than others. One of life's little recurrent truths is that everything takes longer than you think. That's also true at IWA. This project was delayed by the late completion by our contractor of earlier projects. However, we also have some better reasons for our timing. Doing the work during the dry winter season means we don't have to remove the water from the trench and find a place to put it without causing a flood, which is a real problem on the Islands. We also wanted to wait until the City work on Gulf Drive was complete, so that both major routes wouldn't be blocked at the same time. Finally, we need to complete this project before the City begins its project next year to raise that section of Periwinkle Way and improve drainage to alleviate chronic flooding problems in the area.

In summary ... **WE'RE SORRY!!!!** As bad as traffic may seem now, it doesn't really get very heavy until the February/March period. By that time

we hope to be either finished or to the point where road blockages will be minimal. Rest assured that we are watching the situation closely and if things get too bad, we may have to revise our work schedule, at least during peak periods. However, that will increase costs, which are paid by all our members. Therefore we'd like to avoid that option if possible. We're doing our best on a very difficult job!

If you want to know more about this project, including its design details and progress, visit our internet site at <http://www.islandwater.com>. We plan to keep the site updated as the project proceeds.

IWA WANTS YOU!!

It's election time at IWA again, and this year two seats on our Board of Directors will be up for election. The seats are currently held by long-time directors R. J. (Bob) Wigley and H. R. (Lee) Derleth. Bob is completing his third, and last two year term, the last term as President. Lee is eligible for re-election for one more term.

IWA is governed by a five member Board of Directors who serve without pay. Directors must be year-round residents of Sanibel or Captiva and must be IWA members or an official representative of a condominium or other IWA corporate member. Meetings are normally held on the fourth Tuesday of every month. Directors are elected by the membership at IWA's Annual Meeting to be held in April.

Anyone who would like more information should contact our Administrative Assistant, Lori Thompson, at 472-2113, extension 125.

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