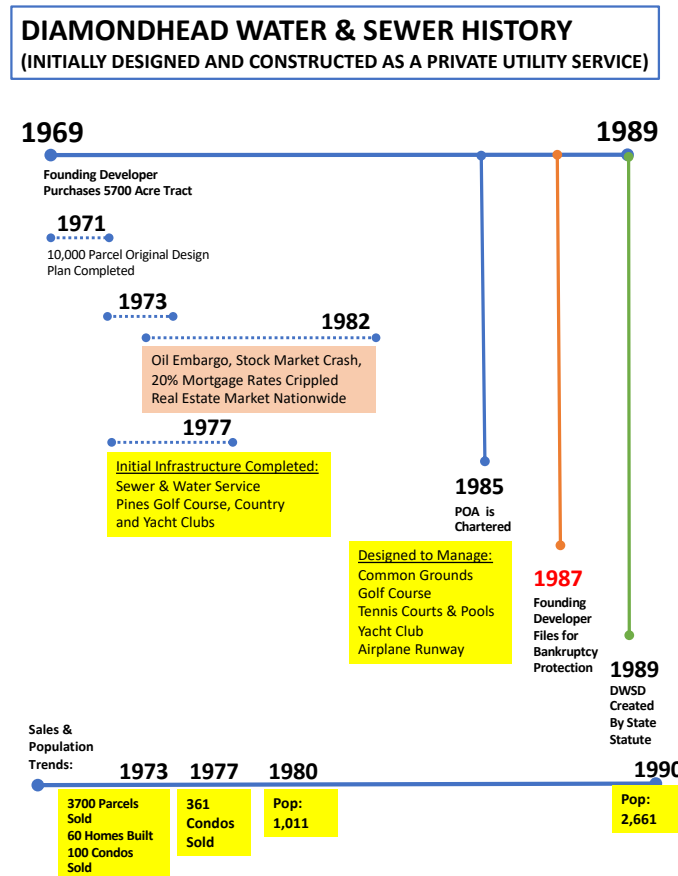


Foundational Primer: Your Diamondhead Water & Sewer District's Development History & Status

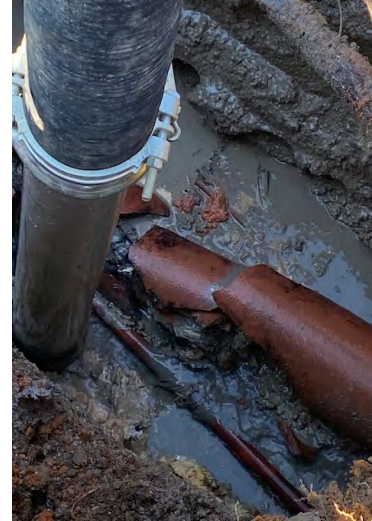
As promised, Post #2 will key on the unique initial development history of Diamondhead's water and sewer utility services. It is unlikely that many of our customers have any understanding of the critical daily challenges that are faced by the District to correct the enormity of defects inherited when the system was designed and engineered over 50 years ago now. In short, a significant portion of the architecture of the subsurface systems that deliver the freshwater to your tap and remove your gray water and sewage was put together by the founding developer in the early 1970s. This developer had a stellar business reputation nationally but walked into an economic buzzsaw during the most critical initial developmental periods of our community's water and sewer infrastructure development. To help guide this discussion, we have included the following 20 year chart (1969 – 1989) highlighting important market impacts that dramatically influenced the integrity of the legacy architecture that still operates today. The 20 year snapshot used parallels the evolution of what was a private water utility service turned public in response to the developer's bankruptcy in 1987. For reference, this chart, and the underlying data points illustrated, were extrapolated from Dr. James Keating's "History of Diamondhead, Mississippi (1969 – 2004)," published online, Diamondhead City Government Website, Community Page:

<https://diamondhead.ms.gov/community/page/history-diamondhead>.



As you can see, the Developer endured one of the most tortured economic periods possible for this risky land development experiment in Hancock County. So, you might ask what this has to do with the water and sewer services you receive today. Well, the answer to that is "everything," at least as regards the appreciation for the challenges we tackle each day for you and your family. Specifically, note that the Developer's plan to sell 10,000 parcels flatlined and he barely saw 20% of his buildout complete before succumbing to bankruptcy. Regardless, he still sold lots throughout the 10,000 parcel inventory that spanned the 4 corners of the 5700 acre tract. Meaning, even when he sold only a few within a sector (Phase) he still had to provide the main sewer and water arteries to reach and service those lots. With so little revenue, and the economy and real estate market in the tank, how much quality in that original construction and engineering investment do you suppose he demanded? We can certainly

help answer that question, as little as could be gotten by with to meet minimum standards. A picture is truly worth a 1,000 words so let's show you a picture of what still services too many remaining customers homes today. Yes!, your eyes are not fooling you, that is clay pipe you see in that picture. You see, a private utility does not fall under the same regulatory design and construction review criteria that public systems have to comply with, especially when not using public funds. Consequently, clay pipe, and substandard PVC materials were available and heavily utilized by the Developer throughout the 10,000 parcel design. The consequence is that we currently respond to an average of 8-10 "Major" main line water and/or sewer collection breaks annually, and 3-5 critical subservice line breaks weekly. Just this past week, residents on Maui Circle got the privilege of experiencing the effects of a blowout of their watermain.



Fast forward two days to Wednesday evening where we were provided clear evidence of what this should mean to all of you. That stormy night we endured a 7 inch recorded rainfall in 12 hours (6pm – 6am). Our sewage collection and treatment system normally operates at an average of 1 million gallons per day (mgd). That flow spiked to 3 mgd causing operations and plant personnel to respond to and work their magic to address alarms, including 4 separate lift stations all night long. Dare say, most of you saw no impact, consequent to the skill of your District employees.

So, the more important question is “how does a threefold increase in flow happen?” Easy, the prior picture illustrates only one of countless breaches in our overextended 50 year old system that draw stormwater out of the saturated soils. This issue is known as infiltration and inflow and is solely attributable to leaking systems. The problem is exacerbated dramatically by inferior stormwater drainage engineering and construction that is consequent to the surface water flooding many of you experience routinely. As that is the City's sole domain, we'll let them address those issues separately. Remaining intellectually honest, we'll absolutely acknowledge that the City, like ourselves with our legacy water and sewer infrastructure, largely inherited the drainage mess from the Developer.

Friends, this is simply the unfortunate reality of what is at stake here each and every day. Infrastructure has a limited life. The best available technology only has a life expectancy of only up to 50 years. As we pointed out, ours was far from the best to start with and it is now over 50 years old. Consequently, these legacy infrastructure breakdowns are increasing in frequency and distribution throughout our community. Fortunately for all of us, we have hired the best management and technical response personnel available to address and manage these issues.

We would be remiss if we did not acknowledge that our history has also given us countless blessings as well. By way of example, since taking over in 1989, the District has moved aggressively to:

- employ the leading analytical technologies and supporting specialists to help identify and rank the defects in each of the service areas (basins);

- replace or reline 100% of the critically deficient sewer and water mains within the next 5 years;
- establish the expanded fire suppression water distribution capacity and infrastructure needed to help secure the highest level fire rating for all of our customers. (Note: this effort alone has saved every resident between \$500-\$1500 per year on their homeowners insurance.);
- continue to modernize and expand 100% of the sewer lift stations network needed to meet the City's 2040 growth projections;
- modernize all residents' water meters with sensors that monitor flow around the clock and, when needed, alerts the District of suspected issues in order to help notify customers of potential leaks within their plumbing systems;
- replace the District's sewage treatment plant and system wide collection controls centers through the acquisition and management of over \$43M in Katrina Federal disaster recovery assistance grant funds; and,
- continue aggressive pursuit of all available grant assistance funding sources to help offset the critical capital improvements required to further improve and sustain our services.

Your Water and Sewer District's public utility development history illustrates just how much can be accomplished when supported by the skill and dedication of a team of top tier professionals. Hopefully this post has given you a much greater appreciation for the scope and magnitude of the legacy engineering challenges we face down on your behalf each and every day to keep that water coming and going safely.

In closing this post we want to thank you again for your support. With the earned reputation of being the best at our trade, it is simply incomprehensible that the subject, much less the consideration of consolidation is being proffered at this time. Nonetheless, we remain confident that once armed with superior knowledge of the unique benefit that is your Water and Sewer District, our customers will turn out in force to vote "No" to this indefensible Referendum.

Please follow all of our remaining posts to continue better learning how, and why, you're served by the **best and most cost effective** water and sewer services on the coast, bar none.

Your Diamondhead Water and Sewer District Board