

## M&M FAQ's

### PREFACE:

Please understand that there are many general rules we have learned about wells and water bearing formations but for every general rule there can always be an exception. This list is by no means perfect, nor does it address every situation arising with water well construction and maintenance. Please do not read this document as a textbook of facts that can be applied perfectly in every situation. This is merely a communication tool to help with understanding of water wells. Please also be aware that the internet is a good place to look to start asking questions but generally has more misinformation about water wells than actual good and accurate information about professional installation methods. Water well methods also change greatly with geographical location. For more specific and detailed information we encourage you to contact our team and ask for more information about any unclear topics.

### Drilling

- 1) How much does a well cost/how much is your per foot cost?
  - a. Well depths vary greatly in our area from just less than 200' to over 1,000' depending on:
    - i. water quality desired
    - ii. quantity desired
    - iii. the geographical location of the well
  - b. There are different costs per foot based on different well designs but there are also fixed costs in most water well estimates that will be weighted differently between different drilling companies. Every driller structures their pricing estimates with a slightly different method which will generally be affected differently by changes in depth. Some of these structures can be difficult to understand. Make sure you understand the pricing structure so that you do not get into a situation where prices skyrocket after construction begins or you hire a contractor based on an unrealistic price or depth estimate.
  - c. The best way to get an idea of your estimated cost for your well is to:
    - i. Provide us with (to the best of your ability, it does not have to be perfect):
      1. Name
      2. Well Address or GPS coordinates
      3. Your contact information

#### 4. The intended use of the water

- ii. Out of respect for our willingness to help we would appreciate it if you would not directly relay information from our records and experience to drillers who may not be as experienced. There is more to locating a sand than just knowing where it should be, however, if a driller sends you a radically different estimate than we send you should cautiously investigate both companies to get a comfort level with their experience and ability in the chosen area.
- iii. Once we have the information, we will either ask for additional information or send a detailed estimate
- iv. Once you receive the estimate please ask questions. You are not bothering us, and we do not charge for questions. We want to drill quality water wells and meet customer's expectations. The best way to do this is through good communication and professionalism

#### 2) How long has M&M been around?

- a. Randy Morgan started the business in 1994 and after working with him for several years, sold the business to Kenneth Starr (the current owner) in 2010

#### 3) Which person's name needs to be on the estimate?

- a. The customer who owns the property where the well is to be drilled should have the estimate issued in their name.
  - i. We have tried in the past to work with other contractors and builders (sometimes even allowing other pump installers to handle the pump equipment after we have drilled the well at their request) and offer them estimates which they have represented to customers. This has often lead to confusion and irritation generally due to the lack of understanding and practice in explaining the water well construction process to include current schedule which is prone to change. In the end this generally only hurts the customer. We do communicate and work with builders on a regular basis but the well owner should understand that even though we are more than happy to work with any of their representatives, we are ultimately working for the individual who is the final user of the well and their satisfaction is our priority. We are willing to work with other contractors as need be but please understand that communication gets more difficult with additional layers of communication between the final user and the water well driller. You are familiar with ("the grapevine game").

#### 4) How do you know when you "hit good water?"

- a. This is one of the most important questions in our mind when selecting a drilling company but can also be one of the most misleading

- b. Knowing the different layers and their general chemical characteristics is our specialty as we have a more extensive well record collection for our area than any other drilling company, with some the records in our collection dating back near WWII.
  - c. Water quality cannot be tested until the well is complete and is also highly subjective depending on the intended use (with the exception being a fluid test available from oilfield contractors which may cost as much as \$30,000 or more to test – obviously not financially expedient). Therefore, no driller can “guarantee” “good water” because knowledge of the formations is always limited and “good water” is a relative term. Therefore, we encourage selecting a competent, experienced driller
  - d. In our geographical area, the water is located in layers of sand, since water will flow through sand but not effectively through shales or clays. We have more in-house tools at our disposal for identifying underground sand layers than most drillers.
  - e. We can identify sand layers, but no one can say exactly what will be encountered during drilling since, the only one who knows exactly where the layers are is He who put it there, however, experience generally increases reliability.
- 5) How much mess will there be?
- a. This depends on the location and the drilling process, but drilling is generally a messy process. We work to try to keep our locations as neat as possible, but our primary goal is a quality water well. Feel free to ask questions to get more detailed information as needed
- 6) Do you guarantee quality
- a. We cannot control the quality of the water, although we are known for being the best of the best when it comes to knowing locations of water qualities and being able to construct a well that will last with minimal maintenance cost.
- 7) How long does it take to drill a well?
- a. Drilling the well can take anywhere from a couple of days to a couple of weeks depending on depth, material drilled, and construction complications.
- 8) What is the warranty on the well? Will I get a written warranty statement?
- a. This is extremely important because there is no reason to unnecessarily wrestle with a defective water well or even worse, pay for a water well twice... and this does happen.
  - b. Different well parts have different warranty periods. In the event something goes out under the warranty period we DO NOT charge labor to you for repairing it, as many industries do. We simply repair the well. You do not get a bill unless you choose to upgrade unrelated parts while we’re on location which will be explained prior to work being performed.
  - c. There is no written warranty statement because any warranty is only as good as the people standing behind it.

- d. Every driller lives and dies by their reputation. You can find someone who will say something good about any driller and likewise there is someone out there that will speak ill of any driller. However, if you ask 15 people who does the best work and has the best warranty you will get a good feel for who does the best work

9) What form of payments do you accept?

- a. Cash
- b. Personal Check
- c. Business Check
- d. Cashier's Check
- e. Money Order

10) Do you finance wells?

- a. No
- b. In our opinion, well work is complicated enough without directly tying financing up in the same business transaction. If a driller feels the need to dabble in finance to get more work, we encourage you to consider why they would do this

11) How soon can you drill my well?

- a. Sometimes we can begin drilling within a week or two, however, we are fortunate that our legacy of quality water wells will sometimes push us to a 3 month backlog of drilling so it is crucial to be clear once you have decided to be added to our schedule so that you are added in the proper order
- b. We do try to keep room in our schedule for emergencies and respectfully ask that you let us know your level of urgency in case someone is left without water due to events like an old well unexpectedly failing.
- c. When drilling goes smoothly, we get ahead of schedule. When there are complications, the process is prone to get behind schedule. The farther out we are, the harder it is to precisely predict schedule. Our guarantee to you is that we will respect everyone with communication and will not leave any location until the job is done right. Quality takes precedence over schedule.

12) What if I am on a construction schedule and I might not be ready?

- a. Please let us know as soon as you decide you want us to drill your well and we will add you to the schedule. If we are ready and you are not, we will gladly move to the next well and hold your spot in the schedule. We only feel it is fair to be patient with you as you are patient with us.

13) How long is the estimate good for?

- a. Estimates are generally good for at least 1 year but generally longer. If we do have pricing adjustments, we will respect estimates as best as we can and try to be flexible for the customer as much as is reasonable.

14) What is the process to get on the schedule?

- a. Respond to the email we sent with your estimate asking to be placed on the schedule. If you do not email, a phone conversation will suffice but please be clear when you are committed to M&M as a drilling company.
- b. Please do not ask to be added to our schedule if you are still considering other drillers or are not satisfied with the estimate.

15) Why is there a mileage charge? Are you bringing a rig in from North Dakota?

- a. We generally base our pricing structure on the normal well being located within 30 miles of Madisonville.
- b. For every mile outside of that we must pay our crew to drive to and from the location every day as well as drive the machinery including additional maintenance costs and fuel farther. Our equipment is expensive to operate because we pride ourselves on having the proper equipment to get the job done right. Hourly wages generally mean leaving the yard early and getting in late which adds overtime hours at time and a half for all of our employees. With payroll taxes, etc. these numbers can get high and we have no mechanism to adequately deal with or predict these numbers other than our experience of an average expense per well of additional mileage. The mileage charge will be a stated amount on your estimate which will not increase unless the location of the well changes
- c. This is not meant to be a punitive charge but merely a tool to help us recover costs that we do not make any money on.

16) What do I need to do to be prepared for a well to be drilled?

- a. Much of this is better suited by conversation once we have coordinated a site visit but questions are welcome. The basic needs are as follows:
  - i. Access to the location
  - ii. Electricity provided to the tank location

17) Will you hook into my electrical panel or run water lines to my house?

- a. We try to work with customers where it makes sense. As a general rule, our electrical work stops at the pressure switch and the plumbing work stops at valve at the pressure tank discharge. We will work outside of these boundaries where extensive work is not needed but it is not generally included in the original estimated cost. If we can do something simple to help out, we often do so with no additional cost other than parts but this depends on the extensive nature of the need. We are not electricians or

plumbers and are not set up to do large scale work in these trades. It does not hurt to ask. Communication is important

## Well Repair

- 1) How soon can you come repair my well?
  - a. Generally, we can come the same day
  - b. We do have work lights on our trucks for emergencies but also appreciate patience as we all have families and like to sleep occasionally
  - c. Depending on the job and the weather it is sometimes prudent to wait until the next day
  - d. If you want to schedule an appointment for non-emergency work, we can do this as well.
  - e. Our general rule of thought process is: Would I want someone to come out if it were my mother, sister, brother, or father who was without water?
- 2) How much does it cost to replace a pump?
  - a. First, let's make sure you need a pump and there is not another problem that is cheaper and easier to repair.
  - b. There are many variables, primarily being the quality of work left by the driller before
  - c. Generally, we recommend to budget higher and hope for cheaper so we recommend a customer be prepared for between \$2,000 and \$2,500 although some pump replacements are less and some are more. We do not intentionally estimate low to get the job
  - d. Usually we can get very close on price because we know the handprints of some of the other drillers and service technicians who don't install equipment properly and can generally compensate for that in the pricing process.
- 3) How can you tell if it was lightning that damaged a pump or faulty wiring?
  - a. This can be challenging to diagnose sometimes and can be misleading depending on who installed the pump initially. Every pump installer will tell you lightning is not covered under warranty, however if we cannot point to conclusive signs that lightning struck, we will err on the side of caution and replace the pump under warranty. I would caution you to know that if the outside wire is the only wire burned in two and the submersible pump cable is not stretched and taped tightly, this was not a lightning strike, especially if the previous installer hung the pump on pvc pipe which rotates upon startup. Basically the loose wire rubs against the side of the casing until the insulation rubs off and then 1 to 5 years after installation you will be pulling the pump

- 4) Can you deepen my existing well or can you lower my pump to good water?
- a. The short answer is no. It's not that it can't ever be done, but we have yet to run into a scenario where it is a financially prudent decision for the owner. We can lower a pump if needed but this is rarely the case if the equipment was installed properly to begin with. Usually lowering a pump is merely a tactic for a pump installer to mask another problem within a well. This should only be done with careful consideration of the water table, well production rates, and submersible pump curves.
  - b. As far as lowering the pump, the well itself has screens that let water in from a particular sand layer. The well screens cannot be effectively moved in a well, therefore, the quality of the water in the well does not change with the depth of the pump. This is different than the purpose and nature of the pump screen. Which simply keeps foreign objects from entering the pump itself
- 5) I have a well that is 600' deep. Is the pump set at 500 or 600?
- a. In our area, we generally set our pumps at 210' unless the well dictates otherwise.
  - b. The pump should be set at least 100' below the water level in the well which generally is within 50-100' of the surface in most of our area (although we are aware of areas of exception). If a pump is set much deeper than necessary some side effects are increased cost of maintenance and possible voltage loss for undersized wire
  - c. If a driller or pump installer sets a pump more than 200' below the static water level this is cause for concern and inclines that the well may be a weak producer and/or that the existing pump may be oversized.
- 6) Do you work on Jet pumps?
- a. In short answer, no. Technology of submersible pumps has become so reliable that jet pumps have become obsolete except in very rare cases and these pumps are set shallow enough that they are generally repairable by the landowner
- 7) What type of tank is the best?
- a. Galvanized pressure tanks are the tank of choice with the following exceptions
    - i. Corrosive water that requires a fiberglass pressure tank
    - ii. High water table that renders a bleeder/check valve system inappropriate and requires a bladder tank
    - iii. As a general rule bladder tanks have only a limited life span compared to a pressure tanks and are generally more susceptible to bacteria growth issues due to the stagnation of water on the upper area of the "backside" of the pump tubing. Bladder tank setups are also more susceptible to freezing
      1. It should be known that in many areas there is no sulfur gas in the water but because the smell of bacteria can often be extremely similar customers often think this is their problem. I can't even count the

number of requests we have for a new well to be drilled that I resolve with a \$100 service call using an effective disinfecting procedure. Some other service technicians view this as an opportunity to either sell you a new well or thousands of dollars in unnecessary filtration equipment.

- 8) If I buy "X" at tractor supply... can you install it?
  - a. Generally this doesn't make sense because there is no warranty for us installing other equipment and there's really not enough savings to justify the risk in installing inferior equipment which will not last as long. Labor costs are high and it is not in the customers benefit to run up multiple labor of installations over the years when a better "X" can be installed for usually little additional cost.
- 9) Do you finance well repair?
  - b. No
  - c. In our opinion, well work is complicated enough without directly tying financing up in the same business transaction. If a service company feels the need to dabble in finance to get more work, we encourage you to consider why they would do this
- 10) What forms of payment do you take? Where do I send it?
  - a. Cash
  - b. Personal check
  - c. Business check
  - d. Cashier's check
  - e. Money order
  - f. We ask that service calls are paid for when the work is completed. Generally cash or a check is handed to the service technician that repaired the well while on location. If that is not possible any of the above forms of payment can be mailed or delivered to 103 South Madison, Madisonville, TX 77864
- 11) Do I need to be at the location for you to work on the well?
  - a. Not unless you want to be there as long as we can access the well and disconnect electricity.
- 12) I have low pressure. Do I need a bigger pump or a bigger tank?
  - a. Not necessarily, we should examine the system before selling you unnecessary expensive well upgrades. Usually pressure issues are solved with much cheaper repairs than pump replacement
  - b. Tank size has virtually nothing to do with pressure. The pressure is limited primarily by the pressure switch and secondarily by the capacity of the pump flow to keep up with usage, which is also limited by the capacity of the well production rate.



- i. Pumps can be increased if need be but the well must be jetted to verify that the pump will not overdraw the well, possibly ruining the pump and potentially destroying the well... we have worked behind technicians who have done this.
- ii. Tank size can be increased which will give you longer cycles between pump starts. Tanks should be of minimum volume to give adequate run time for the pumping rate, however the other equipment should be set up so that the well does not water log.
  1. **\*\*\*IF YOUR WELL IS WATER LOGGING\*\*\*** (filling with water and not having any air volume), you might notice a slight pressure fluctuation or the pump turning on and off very frequently. This is not normal and must be repaired. Every time this happens the pump and motor are stressed and eventually this will cause the pump to fail. Usually, this problem can be repaired for less than \$150

13) Is it a bad idea to put galvanized pipe in a water well?

- a. Not unless the water is corrosive
- b. There are many wells in excess of 50 years old that have galvanized pipe that is in just as good of condition as when it was installed.
- c. Galvanized is preferred in case your pump happens to overheat so that there is a substantial connection to be able to apply force to remove the pump instead of having a pump stuck in your well. Galvanized also torques less upon startup which causes less friction in the well

14) What is the difference in a 3-wire pump vs a 2-wire?

- a. This is a very important understanding to have when selecting well equipment
- b. 2 wire pumps do not have capacitors located on the surface, so when the motor fails, you have to pull it from the well and replace the entire apparatus. The 3-wire pump has a control box on top of the ground with a relay and start (sometimes combined with run) capacitor. If the capacitor(s) or relay fail it is a simple exchange of parts on top of the ground which is much cheaper. It is not uncommon to see a 3-wire motor last over 40 years **\*\*when installed properly\*\***. We might not think things like taping wire would be that difficult but apparently it is. "Simple" things such as how the wire is taped in the well can cause a dramatic decrease in the life of the pump installation. Please note that a 2-wire pump with ground will have 3 wires running down hole where a 3-wire pump with ground will have 4 wires running down hole. Older 3 wire pumps will only have 3 wires running from the control box down hole because years ago they did not have a ground wire to the pump. Yes, both "2-wire" and "3-wire" pumps should have a 5-year warranty generally but if all you are expecting is 5 years out of your pump equipment you probably won't be as concerned with which company repairs the well.

15) Why are the pumps so expensive?

- a. We only install the best because our reputation lives by it. In this business, your reputation is the only thing you really have.

16) What kind of electrical and plumbing work is part of a water well and what should I get another contractor for?

- a. Electrical

- i. Our electrical work generally stops at the pressure switch, although we do minor repairs outside of this such as replace breakers. If the nature of the electrical repairs get fairly extensive such as replacing breaker boxes or major electrical revisions we generally recommend that a professional electrician be selected who will be able to save you money by working more efficiently in their trade. Be cautious of having electricians work on the water well itself because we have had numerous occasions where equipment was possibly damaged when not dealt with properly. Communication is important. We want to help you where it makes sense

- b. Plumbing

- i. Our electrical work generally stops at the valve at the tank discharge, although we do minor repairs outside of this such as repair broken lines. If the nature of the plumbing repairs get fairly extensive such as replacing diagnosing visibly undetectable leaks or major plumbing revisions, we generally recommend that a professional plumber be selected who will be able to save you money by working more efficiently in their trade. Be cautious of having plumbers work on the water well itself because we have had numerous occasions where equipment was damaged when plumbing was not configured properly, including thousands of dollars in pump replacement. Communication is important. We want to help you where it makes sense