Currently we have a fixed jib hoist we use for pulling pumps at lift stations when there is a clog or the pump needs maintenance. The hoist can either be operated via hand crank or an angle drill (which we have). The hoist can be used at all the submersible lift stations as there is an embedded hoist socket for each station on the concrete slab cover.

However, over the last several years, as we have replaced pumps at various stations, we have noticed that the pump style has changed. The old Barnes pumps we had with the traditional style impeller were quite a bit shorter and wider than the ShinMaywa pumps (around 3' versus 5' respectively). While the Barnes pumps had a more manageable size than the ShinMaywa pumps; they were prone to clogging more frequently.

We have been replacing the Barnes pumps for the last 5 years and have had relatively good results with the ShinMaywa pumps. Of course, with any style of pump we have had a few instances where we've had to pull a pump for clogging or a seal fail. Most of the pumps in the collection system are under 15 hp and are not an issue pulling with our current setup. It is the 20 and 25 hp pumps that are a bit too big for the jib we have now.

Case and Point. Earlier this past summer we had some issues at Lift Station 1, it is our largest lift station. We had B&M Technical Services in to diagnose the problem. One of the first things the tech did was to pull the pump rule and out any problems with the pump itself. The technician also called in a hoist truck from their office as he we not comfortable with our equipment to pull the pump. He thought our hoist was a bit undersized for a 25 hp pump especially over a 35' hole.

Currently we have 20 or 25 hp pumps at Lift Stations 1,2 and 7. Lift Station 8 will be added to that list once the upgrades and new force main are complete. All these stations are also 30' or deeper, making working above the wet well a safety concern. With our current jib the operator uses an angle drill to bring the pump to the surface. The difficult part is when the pump is at the surface and needs to be turned. During this turn the person operating the angle drill is working directly over the open hole turning the jib and setting the pump down.

There would also be other uses for a hoist truck besides pulling pumps at the lift stations. A hoist truck would be an asset when repairing fire hydrants. It would make pulling the bonnet (top section of the hydrant much easier and safer. The hoist could also be used to adjust manholes. Currently we hand dig down the rim section of a mh stack to add risers. During this process we need to remove the rim by hand, generally this takes 3 people and depending on how deep we are it can be dangerous to lift the rim out of the trench.

While we can currently pull pumps at most of our lift stations (7 stations). I do not personally feel comfortable myself, or the crew, pulling pumps at the stations with larger pumps over 20hp with our current setup. The pumps are simply too large. At those stations we rely on an outside vendor, usually B&M, if we need to pull the pump for any reason.

A picture of the current hoist set up is attached.