When determining a pump for an application, there are a number of factors to consider. Among them are flow requirements, head conditions, and suction requirements. While the five pumps in the photo are all 6-inch dewatering pumps, they are all capable of pumping in excess of 1,400 gallons per minute. The success of a project is going to be determined mainly with the right pump choice.

As an example, a typical customer may ask for a diesel-driven, 6-inch pump capable of pumping 1,400 gallons per minute (GPM). Well, there are multitudes of pumps that will meet this requirement. Just because it’s a 6-inch pump doesn’t mean it’s equal in performance to all 6-inch pumps. Even if the customer was more specific and stated 1,000 gallons per minute at 150-foot head, this is still not enough information to completely determine which pump is proper for the application. For instance, if a typical end suction centrifugal pump is rented from a generic Rental Company, and the application is a sewage bypass, then a customer may encounter a sewage spill, because a typical end suction centrifugal pump is not meant to pump sewage. A more appropriate pump would be a Diesel-Driven Trash Pump or Non-clog Pump that is designed to handle sewage and solids.

Other items that must also be considered are the size of the suction and discharge lines, pressure ratings of the lines, valves required, and a host of other factors that are generally not thought of, unless there is past experience. In highly critical projects, it is better to contact specialty contractors who typically use, and are more familiar with, all types of pumps in everyday field operations.

Let’s discuss general categories and applications for various types of pumps.

**WELLPOINT PUMP**
This is designed to pump clean water/effluent for a wellpoint dewatering system and lowers the groundwater table to drain construction excavations. It is designed to have the highest air handling capacities on the market and can pump water, while removing large quantities of air without shutting the pump down. A typical 6-inch wellpoint pump is capable of pumping 1,500 gallons per minute with head pressures of 100 feet or more. The water being pumped by a wellpoint pump must be relatively clean.

Well suited for: wellpoint dewatering and sock dewatering.

**TRASH PUMP**
This is designed to pump clean or dirty/trash laden effluent, and most models will pass 3-inch-diameter solids without becoming

---

**ABOUT the AUTHOR**
Terry S. Aylward is the marketing manager for Griffin Dewatering, the leaders in dewatering for 75 years. For more information, visit www.griffindewatering.com.
clogged. These pumps can handle clean, muddy, mucky, or trash laden water and incorporate an open impeller and wear plate. A 6-inch trash pump is capable of pumping 1,500 gallons per minute with 125 feet of head. Trash pumps are widely used because of their reliability and versatility. Well suited for: flood drainage, sewage bypass, pumping polluted wastewater, and pumping settled sludge.

**HIGH PRESSURE JET PUMP**

This is designed to be used as a fire pump, to jet casings or wellpoints without drilling/digging, to pressure agricultural irrigation systems, and in mining and quarry applications where high head capacity is required. Jet pumps are powerful pumps capable of satisfying requirements for high head capabilities. A typical 6-inch jet pump is capable of pumping thousands of gallons per minute of clean water with several hundred feet of head or more. Non-jet pumps just aren’t designed to handle much more than a 100-foot head. Well suited for: quarries/mining, jetting wellpoints, jetting casings, pipe cleaning, pipe testing, water blasting, and marine construction.

**HYDRAULIC SUBMERSIBLE PUMP**

This is designed for dewatering applications in construction, mining, and sewer rehab projects. The benefit of using a submersible pump is that they can be used in areas that would flood and disable a conventional pump. Power units can be installed and operated remotely for safety from flooding and ease of maintenance. The pump head requires less space requirements at the point of pumping; a well designed 6-inch hydraulic submersible will fit into most manhole openings. Hydraulic-driven pumps are an effective solution to those applications where the suction limitations of above ground pumps make them ineffective or non-useable. Well suited for: open pit, lake unwatering, manholes, flood control, mining, and sewer bypass pumping.

**NON-CLOG PUMP**

This is designed to offer the best of both worlds by being able to fill multiple roles such as: wellpoint pump in wellpoint excavation dewatering, sewage bypass pumping, sumping, flood control applications, or other applications that require the pumping of trash laden effluent. Their non-clog impeller is capable of handling stringy materials and solids up to a 3-inch diameter, and large clean out ports offer hassle-free removal of large debris without removing the suction pipe or hose. Well suited for: wellpoints, flood control, sewer bypass, and sumping.

All of the above are 6-inch inch pumps, but all are very different from each other and are designed for different types of jobs. When selecting the right pump, don’t go to the nearest salesperson and say a 6-inch pump is needed; tell them what needs to be accomplished with the pump. A salesman may give what he has in stock or on the shelf; however, a pump and dewatering professional will evaluate the application and provide the right tool. This is only attained from many years of field experience and the availability of a large inventory. Field experience cannot be taught, so please consult a pump professional before selecting a pump for a specific application.