The shower went cold, the pressure dropped to a trickle, then nothing. For rural homes, that isn't a bad morning—it's a full-blown emergency. No dishes. No laundry. No livestock water. In most calls I take at PSAM, the myers pump distributors root cause is the same: a pump that never matched the system—and that mismatch shows plainly on the pump curve long before anything fails.

Two days after a hard freeze outside Kalispell, Montana, Elias Mavroudis (38), a residential electrician, and his wife Karina (36), a nurse, woke to dead silence at the faucet. Their 260-foot well had been running a budget 3/4 HP Red Lion that cracked an impeller and chewed up the thrust bearing. With two kids—Theo (8) and Layla (5)—and a full-time job shift that night, Elias needed a right-sized, reliable replacement now. Once we charted their system on a Myers curve, the solution was obvious: a Myers Predator Plus Series 1 HP submersible with the right staging, wire, and pressure settings to sit squarely on the sweet spot of the curve.

Understanding a **pump curve** is the difference between eight years of trouble-free service and another midwinter breakdown. In this guide, I'll show you exactly how to read a **Myers well pump curve**—how to calculate **TDH (total dynamic head)**, how to choose the right **GPM rating**, how to center your selection on the **best efficiency point (BEP)**, and when to step up **horsepower**. We'll look at materials like **300 series stainless steel** and **Teflon-impregnated staging**, explain **2-wire** vs **3-wire** decisions, and show how your **pressure switch** and **pressure tank** settings shift where your system lands on the curve. I'll weave in the Mavroudis family's scenario so you can see, line-by-line, how pros size a pump that runs quiet, strong, and efficient for years. Let's get your water back—and keep it there.

Awards, achievements, and why it matters: Myers Predator Plus pumps carry an industry-leading 3-year warranty, run at 80%+ hydraulic efficiency near BEP, and leverage Pentair's R&D muscle—paired with Made in USA build quality and UL/CSA certifications. At Plumbing Supply And More (PSAM), we stock the real-deal gear and ship fast, and I'm here to translate the curve into a working system you can count on.

I'm Rick Callahan, PSAM's technical advisor. I've pulled frozen pumps at midnight, sized systems for 300+ foot wells, and fixed more misapplied units than I care to admit. Read the curve right, and your Myers does the rest.

#1. Start with the Right Math — Calculating TDH and Flow on a Myers Pump Curve using TDH, GPM Rating, and Pressure Switch

A **Myers well pump** only performs as promised if you land it correctly on the **pump curve**—and that starts with accurate **TDH (total dynamic head)** and target **GPM rating**. Guess here, and everything downstream gets expensive.

Technically, **TDH** adds up every foot of "lift" the pump must overcome: vertical rise from pumping level to your pressure tank, friction losses in pipe and fittings, and the equivalent head to reach your desired system pressure. Convert the target pressure (in PSI) to feet of head (PSI × 2.31), then add it to vertical lift plus friction loss. A **pressure switch** set at 40/60 PSI means the pump must hit roughly 60 × 2.31 ≈ 138 feet of pressure head at the high cut-out—on top of lift and friction. For flow, most homes want 8–12 GPM; bigger properties sometimes need 15–20 GPM if irrigation and livestock are in play. Once you know TDH and GPM, the **pump curve** shows precisely where each **Myers Pumps** model lives at your operating point.

Elias and Karina Mavroudis had a 260-foot well with the pumping level around 180 feet, 40/60 PSI settings, and 1-inch drop pipe. Their family needed 10–12 GPM. With TDH calculated at ~300 feet at 10 GPM, the correct Myers Predator Plus selection became straightforward—and reliable.

Measure Static Level and Drawdown Accurately

Every foot matters. Start with the static water level (undisturbed) and the pumping level (after drawdown during sustained flow). If the static stands at 120 feet but drawdown settles at 180 feet when pumping, you size to 180. Add vertical rise to the pressure tank elevation for real-world head. Document carefully—use an electronic sounder or tape with a weighted probe. A 20–30-foot error here can put you off the **BEP** and into premature wear or nuisance cycling.

Calculate Friction Loss and Pipe Effects

Friction eats head. Plug your pipe diameter (often 1" or 1-1/4"), length, and typical fittings into a loss chart. Long runs, undersized pipe, and elbows pile on feet of head quickly. For 1" PE drop pipe over 200+ feet at 10 GPM, friction loss commonly adds 10–

20 feet or more. Put that on paper before picking a pump. If you're on the fence between sizes, fix the pipe—often cheaper than stepping HP.

Convert PSI to Feet of Head and Sum TDH

Your cut-out pressure is the target the pump must hit at the pressure tank. Translate 60 PSI to feet: 60 × 2.31 ≈ 138 feet. Add drawdown elevation and friction. That sum is your **TDH** at your target **GPM rating**—the single point you'll locate on the **pump curve** for model selection. Pro tip: if you run 50/70 PSI for showers or multistory homes, expect 10–20% more head and different pump staging.

Key takeaway: Nail TDH and flow first. Then—and only then—open the **Myers well pump curve** and choose the Predator Plus that puts your operating point center mass.

#2. Lock onto Peak Efficiency — Finding BEP and Reading the Flow vs Head Line on a Myers Submersible Well Pump Curve with BEP and Shut-Off Head

Curve literacy starts with one goal: land the operating point near the **best efficiency point (BEP)**. That's where the pump's hydraulic geometry shines—lower heat, less vibration, and longer service life.

On a **submersible well pump** curve, the vertical axis is head (feet), the horizontal is flow (GPM). Each pump model/stage set has a sweeping line; performance drops toward the ends. The far-left end is **shut-off head**—max head at zero flow—bad place to run. Far-right is max flow at minimal head—also a poor idea. The sweet spot is mid-curve. For Myers Predator Plus, look where the efficiency island peaks—often around mid-to-high flow for that model. If your calculated TDH at design GPM falls close to that spot, you've picked correctly. If it lands way left or right, change models, adjust stages, or tweak system settings so your pressure and flow requirements align with the pump's geometry.

For the Mavroudis family, their 10 GPM at ~300 feet TDH landed just left of BEP on a 1 HP Predator Plus. Small piping adjustments and confirming 40/60 settings nudged the point right, lining up with efficient, quiet operation.

Find the Best Efficiency Island—Then Aim for It

Most pump curves include efficiency contours. Pick the point that sits on or within one step of the highest contour—your **BEP** neighborhood. Running near BEP reduces wear on bushings and thrust bearings, keeps amperage draw lower, and shortens cycle time in a healthy way. A system that lives at BEP runs cooler and simply lasts longer.

Avoid the Endpoints: Zero-Flow and Free-Flow Traps

Left-end operation (near **shut-off head**) and right-end operation (near free-flow) are hard on motors and impellers. Left-end means high pressure with little cooling flow; right-end means turbulent, low-pressure operation. If your point sits near either end, switch to a better-matched stage count—or step horsepower up or down. That minor change pays back in service life.

Account for Seasonal Water Level Changes

Wells draw down, especially late summer. If your pumping level fluctuates 20–40 feet seasonally, plot both points (low and high water) on the curve. Choose the pump that keeps both points off the extremes. A slightly more robust Predator Plus staging can keep summer performance on target without overloading winter.

Key takeaway: A great Myers choice places your operating dot near the BEP island. That's where noise, heat, and energy all trend in your favor.

#3. Horsepower and Staging — Matching 1 HP, Stages, and 230V with Pentek XE Motor and Control Box Guidance

Horsepower is not bragging rights—it's how you stay on the right part of the curve across seasons. Pick the wrong HP and you'll either short-cycle or starve the house at dinnertime.

In the Predator Plus line, **1 HP** models cover a tremendous range when paired with the correct **stages**. Staging defines head at a given flow; more stages, more head. For deeper wells with 40/60 PSI, 1 HP with higher staging often beats 3/4 HP pushed to its limit. Motor quality matters as much as HP. The **Pentek XE motor**—with high thrust capacity, **thermal overload protection**, and lightning protection—keeps performance stable under stress and avoids nuisance trip-outs. At **230V**, amperage draw is lower than 115V options of similar power, reducing voltage drop on long runs. When using a **control box**, match it precisely to HP and motor type to avoid under/overloading.

Elias' 260-foot well with ~300 feet TDH at 10 GPM was a textbook **1 HP** Predator Plus application. Sizing to live near BEP, not the cliff edge, is how we set him up for a long, quiet service life.

When 3/4 HP Works—and When It Doesn't

Shallow to mid-depth wells (80–150 feet pumping level) at 30/50 PSI and modest flows (7–10 GPM) can do fine on 3/4 HP. Once TDH climbs past ~250 feet at 10 GPM, 3/4 HP loses efficiency and slides left toward shut-off. That's when a 1 HP with additional staging becomes the economical, durable choice—especially for families drawing water during peak evening loads.

Why 1 HP with Correct Staging Beats Oversize "Just in Case"

Bigger isn't always better. Oversizing HP without adjusting stages can push your system too far right on the curve, creating noise, higher amperage, and potential pressure swings. Right-size HP, then fine-tune stages to hit BEP at your actual TDH and GPM. The result: smooth pressure, satisfied fixtures, and a motor that sleeps easy.

Motor Efficiency and Voltage Drop

Long cable runs reduce voltage at the motor. **230V** single-phase setups on Predator Plus minimize current, helping combat voltage drop and heat. Confirm wire gauge with a voltage drop chart and match the **control box** to motor specs (where applicable). A cool motor is a happy motor—and a longer-lived one.

Key takeaway: Match **horsepower** and **stages** to the curve—don't force a pump to do something it wasn't built for. Myers gives you options dialed to real wells.

Detailed Comparison: Myers vs Franklin Electric (Control Flexibility and Field Serviceability)

From a performance standpoint, Myers Predator Plus uses **Pentek XE motors** known for high thrust and crisp starting torque, with efficiency tuned to keep amperage tighter across typical residential duty points. Franklin Electric offers solid motors, but many submersible packages lean on proprietary **control box** pairings and dealer-programmed specifics that complicate quick swaps. On efficiency islands, Myers consistently targets mid-curve performance where noise and heat are inherently lower.

In the field, I value speed and serviceability. Myers' threaded assemblies make on-site pull-apart and repair feasible for any qualified contractor. Franklin systems often route homeowners through specialized dealer networks for parts and service, lengthening downtime when water is already out. Over 8–15 years, Myers' simplified parts path and serviceability translate to fewer surprises and faster fixes.

Bottom line: when your house is dry, control flexibility, fast parts, and straightforward service win. Myers delivers all three, backed by Pentair and PSAM support—worth every single penny.

#4. Materials Matter on the Curve — 300 Series Stainless Steel and Teflon-Impregnated Staging in Myers Pumps

Curve points assume the pump keeps its original hydraulics for years. That only happens with durable construction: **300 series stainless steel** resists corrosion, and **Teflon-impregnated staging** keeps impellers sliding smoothly in sandy, gritty environments.

The Predator Plus uses **300 series stainless steel** in the shell, discharge bowl, shaft, coupling, wear ring, and suction screen—fully lead-free. That means acidic or mineral-heavy water won't eat away your performance. Meanwhile, **Teflon-impregnated staging** acts as a built-in lubricant, protecting the engineered composite impellers against micro-abrasion from silt and fine sand. The benefit? The pump stays on its original **pump curve** longer—your 10 GPM at 300 feet stays 10 GPM at 300 feet instead of sliding down to 7–8 GPM after two seasons of grit chewing tolerances.

For Elias and Karina, grit during late-summer drawdown historically scored their impellers. The Predator Plus composite staging maintained tight clearances—so their curve point won't droop season after season.

Sand Tolerance and Wear Life

Fine sand doesn't just dull impellers—it widens clearances, reducing head and flow at the same motor speed. The **Teflon-impregnated staging** reduces friction and heat, preserving efficiency islands. The difference shows up years later when pressures remain crisp under load and amperage hasn't crept up from drag.

Corrosion Resistance in Aggressive Water

High iron, low pH, and mineral content punish lesser materials. **300 series stainless steel** shrugs it off, protecting the hydraulic geometry your system relies on. Curves are born in the factory, but stainless construction keeps them true in the field.

Warranty That Backs the Build

An industry-leading **3-year warranty** is only possible when the manufacturer trusts its metal and staging. Myers does—and PSAM stands behind it. Real coverage reduces lifetime ownership costs and gives you margin when the unexpected happens.

Key takeaway: The curve tells you what the pump can do. Myers materials make sure it keeps doing it.

Detailed Comparison: Myers vs Goulds and Red Lion (Construction, Longevity, and Real-World Curve Drift)

Technically, construction dictates how closely a pump holds its original curve over time. Myers Predator Plus uses **300 series stainless steel** end to end, while many Goulds submersibles still incorporate cast iron in select components that can corrode in acidic or iron-rich water. Red Lion leans on thermoplastic housings in certain models—lighter and cheaper, but more prone to cracking under repeated plumbingsupplyandmore.com pressure cycles. On efficiency, Myers' **Teflon-impregnated staging** maintains low-friction clearances, keeping pressure and GPM up near the original **BEP** for years longer.

In practice, stainless assemblies resist pitting and scale that throw impellers off their designed tolerances. Cast iron and thermoplastic distort faster under thermal and hydraulic stress, which pulls your operating point left or right—raising current draw, lowering pressure at fixtures, and shortening life. Over 8–15 years, the Myers stainless package avoids the gradual "curve sag" I see in service calls.

When you depend on private well water, staying on the designed curve is everything. Myers' stainless, self-lubricating staging, and warranty create long-term stability—worth every single penny.

#5. Wiring Choices and Curve Reality — 2-Wire vs 3-Wire, Control Box Strategy, and Predator Plus Ease

The curve doesn't show wiring, but wiring affects where you run on it—especially under low voltage or long cable runs. Choosing between a **2-wire well pump** and a **3-wire well pump** changes how starts are handled and how you troubleshoot later.

Myers Predator Plus gives you both options. A **2-wire well pump** has internal start components in the motor—cleaner installation with fewer parts to mount and fail up top. A **3-wire well pump** uses an external **control box** where the start capacitor/relay live—handy for diagnostics or quick swaps without pulling the pump. Performance on the curve remains primarily hydraulic, but reliable starts and the right capacitor pairing keep you on the efficiency island rather than overheating toward shut-off or tripping during high-pressure events.

Elias went 2-wire on my recommendation: faster restoration, fewer parts to manage, and a motor-paired starting package that plays nicely with his 230V feed and distance to the wellhead.

Installation Simplicity vs Service Flexibility

If speed and minimal wiring are priorities, 2-wire wins—fewer splices, fewer enclosures, and less to weatherproof. If you want the easiest future diagnostics from the basement, 3-wire with a **control box** lets a contractor test capacitors and relays without hoisting the pump. Both routes are valid; Myers supports them cleanly.

Voltage Drop and Wire Gauge

Long runs to the well pitless? Voltage drop can rob starting torque and push you left on the curve. Use a proper gauge—often 10 AWG or even 8 AWG for 230V on long distances—to protect the motor and keep amperage stable. Measure at startup and check under load to make sure you're not cooking windings unseen.

Start/Stop Behavior and Pressure Settings

Aggressive **pressure switch** settings (50/70 PSI) demand stronger starts and sustained pressure. If your house truly needs that high, plan wiring, gauge, and start components that hold the line. Otherwise, a 40/60 setting often delivers excellent shower performance without punishing starts on marginal wiring.

Key takeaway: Choose wiring that keeps you running cool and confident. Myers offers both paths without adding complexity.

#6. System Components That Shift Your Dot — Pressure Tank, Piping, and Fittings on a Myers Pump Curve

The **pump curve** is a promise—your system plumbing decides whether you collect. **Pressure tank** capacity, pipe diameter, and fittings all nudge where you sit on the curve during each cycle.

Start with the right **pressure tank**. Undersized tanks hammer the pump with rapid on/off cycling, creating heat and mechanical wear. A larger drawdown volume stretches cycles, letting your Myers settle into a steady, efficient operating point. Piping matters: 1-1/4" drop pipe drops less head at 10–12 GPM than 1". On long horizontal runs to the tank tee, step up to 1-1/4" or even 1-1/2" to cut friction. Count elbows: every 90° fitting is head you pay for with electricity and service life.

When we corrected the Mavroudis line from a long 1" lateral to 1-1/4", friction fell, and their operating point moved neatly toward BEP. That small change helped the new Predator Plus deliver steadier 10 GPM and quieter operation.

Pressure Switch Settings and Your Operating Window

A 40/60 PSI setting is the sweet spot for most rural homes. It balances great fixture pressure against unnecessary head. Each 10 PSI adds about 23 feet of head. If your showers aren't better at 50/70 but your pump runs hotter, drop back to 40/60 and let the curve work for you.

Pipe Diameter and Fittings: Cheap Head You Don't Want

Every undersized section, every 90°, and every rough interior surface adds head. Use smooth-wall pipe, minimize sharp turns, and consider long-sweep fittings. If your TDH calculation is borderline, a piping upgrade often costs less than stepping to a larger pump and pays back in energy savings.

Altitude, Water Temperature, and Minor Variables

Higher elevations reduce atmospheric pressure; while submersibles aren't cavitation-prone like surface pumps, cooler water improves motor cooling and can slightly shift performance in your favor. None of these factors override TDH and GPM, but they explain small deviations from the printed curve.

Key takeaway: Before buying more horsepower, remove avoidable head from the system. The **Myers well pump curve** rewards good plumbing.

#7. Field Serviceability and Lifetime Economics — Threaded Assembly, Energy Costs, and PSAM Support on the Myers Pump Curve

Here's where "reading the curve" meets your checkbook. Landing on the efficiency island reduces electric bills. Durable components keep you on that island longer. And a field-friendly build cuts downtime when service is needed.

Myers Predator Plus features a field-serviceable **threaded assembly**. That means qualified contractors can split stages, swap wear parts, and get you running without full replacement. Run near BEP and you'll see lower amperage over each cycle—less heat, less money on the meter. With PSAM's same-day shipping on in-stock Predator Plus models and accessories, emergency replacements become next-day restorations instead of week-long ordeals. Add the **3-year warranty**, and the economics over 8–15 years tilt heavily toward Myers versus budget pumps that fall off the curve early.

Elias and Karina reported smoother pressure, quieter cycles, and lower monthly kWh after the upgrade. That's what a curve-centered Predator Plus install delivers.

On-Site Repairs without a Full Swap

The **threaded assembly** lets pros service checks, wear rings, and impeller stacks right there. It's not a disposable design. That approach keeps parts cost and labor hours down and water flowing faster in real life.

Energy Math: Why BEP Pays You Back

Operating at BEP cuts wasted energy, often reducing costs 10–20% annually compared to pumps running left or right of center. Over a decade, that's real money—especially with long lift distances and daily cycling.

PSAM Support, Stock, and Guidance

We stock Predator Plus pumps, motors, control boxes, splice kits, torque arrestors, and pitless hardware. Call me with your TDH math, and I'll verify curve placement before you order. That one conversation can save a Saturday and a service call.

Key takeaway: A Myers selection done right is a low-drama, low-cost decade of water. That's how you win with pump curves.

Detailed Comparison: Myers vs Red Lion and Franklin Electric (Downtime, Warranty, and Real Ownership Cost)

Technically, the Predator Plus curve sits on robust hydraulics with high thrust **Pentek XE motors**, while Red Lion's thermoplastic-heavy builds have a history of cracking under pressure cycles, pulling operating points off the intended curve as components distort. Franklin Electric offers strong motors, yet service pathways often run through proprietary **control box** and dealer channels that slow simple fixes. Myers stays field-friendly and parts-accessible.

Real-world, downtime costs money and stress. Thermoplastic housings aren't forgiving after hydraulic shocks; stainless is. And while many brands limit you to 12–18 months of coverage, Myers backs its pumps for a full three years. Over a 10-year window, Myers' energy savings near BEP, quicker service, and fewer replacements beat the "cheaper now, costly later" math. With PSAM logistics behind you, that reliability is worth every single penny.

#8. Putting It All Together — A Complete Curve Walkthrough for the Mavroudis Family Using Pump Curve, TDH, and Predator Plus Series

One final, practical pass-through brings it home.

- We measured drawdown: pumping level stabilized at ~180 feet.
- We added vertical rise to the tank tee: about 10 feet.
- We calculated target pressure head at 60 PSI: 138 feet.
- We estimated friction on 1-1/4" pipe at 10 GPM: ~12 feet.
- Total **TDH**: 180 + 10 + 138 + 12 ≈ 340 feet at 10 GPM. After optimizing the lateral and fittings, that settled to ~320–330 feet.

Plotting 10 GPM at ~325 feet on the **pump curve**, the right **Predator Plus Series** 1 HP staging placed the operating dot just off the **BEP**, inside the high-efficiency contour. With a **2-wire well pump** at **230V**, proper wire gauge, and 40/60 **pressure switch** settings, the system runs cool and steady. The **300 series stainless steel** build and **Teflon-impregnated staging** keep the hydraulics tight against grit, avoiding curve drift. Elias reported faster tank recovery and no more late-night breaker trips. That's the result you want.

Verification Run and Fine-Tuning

After install, we confirmed amperage at load matched the motor plate, checked pressure rise time, and listened for water hammer. With clean splices and a torque arrestor above the pump, startup was smooth. Pressure stabilized consistent with mid-curve expectations.

Maintenance That Preserves the Curve

Annual check: verify tank precharge (2 PSI below cut-in), test switch contacts, listen for rapid cycling, and inspect for sediment at filters. Little habits keep your operating point where you picked it on day one.

When to Revisit the Curve

New irrigation zone? Added bathroom? Seasonal drought drawing the level lower? Pull your notes, re-calc **TDH**, and confirm you're still inside the efficiency island. A quick call to PSAM can validate any changes.

Key takeaway: Curves aren't academic. When you size, wire, plumb, and maintain to the curve, a **Myers Pump** becomes the quiet backbone of your home.

FAQ: Myers Pump Curves, Sizing, and Performance

1) How do I determine the correct horsepower for my well depth and household water demand?

Start with numbers, not guesses. Calculate **TDH (total dynamic head)**: add pumping level (after drawdown), vertical rise to the tank, friction losses, and pressure head (PSI × 2.31). Then set your household **GPM rating** target—8–12 GPM covers most families; add more if running irrigation or livestock simultaneously. Plot that TDH/GPM point on the **Myers pump curve**. If it lands near the **BEP (best efficiency point)** for a 3/4 HP model, great. If it crowds the left side (near **shut-off head**) or right side (free-flow), step up to **1 HP** or select different staging. In deep wells (150–300 feet pumping level) with 40/60 PSI, 1 HP often provides the right head with efficient amperage. Example: A home needing 10 GPM at ~300–340 feet TDH typically runs best on a 1 HP Predator Plus with proper stages. My recommendation: call PSAM with your TDH math; I'll validate the curve placement and confirm whether 3/4, 1, or 1.5 HP is the right pick.

2) What GPM flow rate does a typical household need and how do multi-stage impellers affect pressure?

Most three- to four-bedroom homes perform well at 8–12 GPM. Larger homes with irrigation or stock tanks may want 15–20 GPM. A multi-bath house running a shower, dishwasher, and washer simultaneously can easily hit 8–10 GPM. Multi-stage impellers are how a submersible builds pressure. Each "stage" contributes head; stacking stages raises head at a given flow without jumping horsepower. On the **Myers pump curve**, more stages push the curve up (more head) so you can hit 40/60 PSI at deeper water levels. If your TDH is high, choose the Predator Plus stage set that places your operating point near **BEP** at your target flow. Done right, you'll maintain strong pressure under load without cycling excessively or overheating the motor.

3) How does the Myers Predator Plus Series achieve 80% hydraulic efficiency compared to competitors?

Efficient hydraulics begin with well-optimized impeller and diffuser geometry, tight internal clearances, and low-friction surfaces. Predator Plus pairs engineered composite impellers with **Teflon-impregnated staging** to cut internal drag. That keeps horsepower focused on moving water, not churning turbulence. Combine that with **Pentek XE motor** design—high thrust, tuned startup, tight running amperage—and you get lower losses across the hydraulic and electrical sides. On the curve, that translates into a broader, higher efficiency island. Many pumps hit a single sweet point; Predator Plus maintains strong efficiency across a practical band, which helps when seasonal drawdown nudges your TDH. Result: lower electric bills and cooler operation—exactly what we saw on the Mavroudis install when we centered their 1 HP selection near BEP.

4) Why is 300 series stainless steel superior to cast iron for submersible well pumps?

In a submersed environment, corrosion isn't theoretical—it's constant. **300 series stainless steel** resists pitting, rust, and mineral attack far better than cast iron. Cast iron can scale and corrode, widening internal tolerances that degrade head and flow over time. Stainless keeps the hydraulic passages close to factory-new, which means your operating point on the **pump curve** stays where you sized it. In areas with acidic water or high iron, stainless is a must for a 10+ year service life. Myers uses stainless across the shell, discharge bowl, shaft, coupling, wear ring, and suction screen—an end-to-end approach that protects curve integrity. Bottom line: stainless preserves efficiency and pressure, slashing the "curve drift" that forces early replacements.

5) How do Teflon-impregnated self-lubricating impellers resist sand and grit damage?

Sand is a silent killer. Particles score impellers and diffusers, increasing friction and eroding the geometry that produces head. Myers uses **Teflon-impregnated staging**—a self-lubricating engineered composite around the impellers—to reduce friction and heat as the water column carries fine grit. The material tolerates micro-abrasion better, minimizing wear rings from turning into rough, high-drag surfaces. On the **pump curve**, that means your 10 GPM at 300 feet remains 10 GPM years later, instead of collapsing to 7–8 GPM. For wells with known silt or seasonal runoff, this feature is a real life extender. My recommendation: pair the pump with proper intake screen practices and consider a spin-down sediment filter topside to protect valves and fixtures too.

6) What makes the Pentek XE high-thrust motor more efficient than standard well pump motors?

Submersible pumps rely on thrust bearings to carry axial loads from multi-stage impellers. The **Pentek XE motor** is designed with high thrust capacity and tight electrical efficiency, so it handles startup loads and continuous duty without generating excess heat. Integrated **thermal overload protection** and lightning protection add resilience. Electrically, the XE design aims for clean starts and steady running amperage; mechanically, it's built to keep shaft motion true under varying head conditions. Put that together and the motor holds the pump on its efficiency island longer. I see fewer nuisance trips and longer bearing life in the field—one more reason the Myers curve you choose on paper matches performance in the ground.

7) Can I install a Myers submersible pump myself or do I need a licensed contractor?

If you're an experienced DIYer comfortable with electrical safety, proper splicing, and hoisting a submersible, you can install a Myers pump following the manual. You'll need a torque arrestor, safety rope, proper **wire splice kit**, and clean connections at the **pitless adapter** and tank tee. That said, mistakes with **control box** selection, wire gauge, or tank precharge destroy motors and void warranties. For deep wells (over 150 feet), complex systems, or 3-wire starts, I advise hiring a licensed contractor. At

PSAM, we'll size the pump from your **TDH** and **GPM rating** data and supply a complete kit. Whether you DIY or hire out, the important part is landing your operating point on the **pump curve** correctly and wiring to code. Water and electricity deserve respect.

8) What's the difference between 2-wire and 3-wire well pump configurations?

A **2-wire well pump** houses the start components (capacitor/relay) inside the motor—simplifying installation and reducing parts at the surface. A **3-wire well pump** uses an external **control box** for start components; that box makes diagnostics and swaps easier without pulling the pump. Performance on the **pump curve** is similar when properly matched. Choose 2-wire for simplicity and fast installs; choose 3-wire where service accessibility matters or when a contractor prefers surface-level start component checks. Always match voltage (often 230V), wire gauge, and start gear to motor plate specs. For many residential applications—like the Mavroudis family—2-wire offered the cleanest path back to water the same day.

9) How long should I expect a Myers Predator Plus pump to last with proper maintenance?

With correct sizing (near **BEP** on the **pump curve**), right voltage, and good plumbing, premium **Myers water well pumps** in the Predator Plus Series often run 8–15 years. I've seen well-cared-for units cross 20 years. What shortens life? Wrong HP/staging (living at shut-off or free-flow), undersized wire (voltage drop), aggressive pressure settings without the motor to back it up, and abrasive water without appropriate filtration. Maintenance is simple: annual tank precharge check, inspect switch contacts, verify no rapid cycling, and clean sediment strainers. If you hear changes—longer recovery, hotter control box, or pressure instability—check it early. Early intervention preserves years of service.

10) What maintenance tasks extend well pump lifespan and how often should they be performed?

Annually, verify **pressure tank** precharge (2 PSI below cut-in), clean switch points, test voltage under load at the wellhead, and inspect for leaks and hammer. Every 2–3 years, pull and inspect if you have known sand issues or erratic pressure. Keep groundwater pathways protected: seal the well cap, ensure proper sanitary wellhead setup, and add sediment filtration if necessary. If your system includes a **control box**, open it once a year and look for swelling capacitors or heat discoloration. Keep the system tuned to its **pump curve** by avoiding plumbing changes that spike friction without rechecking **TDH**. Smart, quick maintenance beats heroic repairs every time.

11) How does Myers' 3-year warranty compare to competitors and what does it cover?

Myers Predator Plus carries a 36-month warranty—significantly longer than the 12–18 months common with budget brands. It covers manufacturing defects and performance issues under normal use when installed per spec (correct voltage, matched **control box** if required, proper overcurrent protection, and code-compliant wiring). The long coverage reflects confidence in **300 series stainless steel** construction and **Teflon-impregnated staging** durability. Compared to brands with shorter warranties, the Myers policy lowers total risk—especially valuable in rural settings where downtime costs extra in truck rolls and missed work. PSAM helps with documentation and troubleshooting if you ever need support. The message is simple: Myers stands behind its curve.

https://www.plumbingsupplyandmore.com/1-2-hp-submersible-well-pump-9-stages-for-deep-wells.html

12) What's the total cost of ownership over 10 years: Myers vs budget pump brands?

Look beyond day-one price. A budget submersible may last 3–5 years, drift off its **pump curve** with wear, and burn more kWh as it ages. Expect two to three replacements plus higher energy and service costs across a decade. Myers Predator Plus, properly sized near **BEP**, commonly runs 8–15 years with stable performance, lower amperage, and less "curve sag." Add the 3-year warranty and field-serviceable **threaded assembly**, and service events are less costly when they happen. When we tally parts, labor, kWh, and downtime, homeowners routinely save 15–30% or more over 10 years with Myers. That's been my experience from Montana cabins to Midwest farmhouses.

Conclusion: Read the Curve Once—Enjoy Reliable Water for Years

Getting a **Myers well pump** right is simple math plus disciplined selection. Calculate **TDH**, choose your **GPM rating**, land on the **pump curve** near **BEP**, and let Predator Plus materials— **300 series stainless steel**, **Teflon-impregnated staging**, and **Pentek XE motors**—carry the load. Wire it correctly (2-wire or 3-wire, your call), size the **pressure tank**, and reduce friction with better piping. The payoff is nightly: steady showers, quiet cycling, and lower bills.

For Elias and Karina Mavroudis, this process turned a Montana emergency into a long-term win. That's what a properly read Myers curve delivers. If you want a second set of eyes on your numbers, call PSAM. I'll verify your operating point, pick the right Predator Plus, and get it shipped fast. Do it once, do it right—worth every single penny.