Point Well Planning Guide

WELL WATER CONNECTION, INC.

Water Well Design & Project Management

WELL WATER CONNECTION, INC.
Water Well Design & Project Management

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PO Box 158 * Tewksbury, MA 01876 * Tel: 978-640-6900 * Fax: 978-640-6901 * www.WellWaterConnection.com

WELL WATER CONNECTION, INC.
Water Well Design & Project Management

Company Profile

Thank you for your interest in ***Well Water Connection, Inc.*** and for allowing me to introduce myself and my company to you. After receiving a civil engineering degree from the University of Massachusetts in 1990, I worked on the Central Artery Project for Stone & Webster's Geotechnical Engineering Division in Boston. There I supervised geotechnical site investigations and drilling operations, monitored well installations and performed bedrock and soil testing, both in the field and in the laboratory. As the geotechnical work on the "Big Dig" was completed, I was laid off, so in 1995, I started working for a small local artesian water well drilling company. Over the next six years as the sales manager and then general manager of that company, I became directly responsible for sales, design, coordination and supervision of the installation of over 600 residential and commercial artesian well and pump systems.

During that time, I listened to many questions, concerns and complaints from home owners, property owners, property managers, landscapers and irrigation contractors about the limited information and services provided by most well drilling companies.

After six successful years with that company , I began to search for a company that could provide all types of water wells (not just artesian), but also the pumps, filtration systems and the planning, permitting, design and maintenance services that I knew by now were necessary for quality well installations and the key to long-term satisfied customers. I quickly learned that that type of company did not yet exist.

In 2002, I started ***Well Water Connection, Inc.***, a truly full-service, water well design and project management company that provides well-managed, custom-designed irrigation wells, pumping systems, filtration and related services that dovetail seamlessly with our customers' irrigation systems and landscape plans. We are a company whose capabilities and menu of services is not limited by our drillers' experience or by the type of equipment we own. With a civil engineering degree and geotechnical engineering background , and professional affiliations with competent, highly knowledgeable, fully licensed and insured water well drillers and related professionals, we are able to handle large projects while still providing personal one on one attention to the smallest details. We realize the importance of good communication with our customers, whether they are big or small, and meeting the technical concerns and practical expectations of the other engineers, designers and contractors working on the project.

In 2011, we moved our office to a new facility, opened our Water Filtration Division and hired additional service and administrative staff. In addition, we made an arrangement with a local retail store, **Quality Pump & Supply**, to offer professional grade water pump and filtration products at a discounted price for our customers. As we continue to grow and develop, we strive to provide our customers with the best service, but know the decision to hire a contractor can be challenging. At ***Well Water Connection, Inc.,*** one of our goals is to provide our customers with enough information to make well-informed decisions. Please do not hesitate to contact our office if you have any questions, need more information, references, or would like a free, no-obligation written estimate for your water well related project.

We are proud to offer you our expertise and eager for you to experience our level of service. Thank you again for allowing me to introduce my company to you. We look forward to working with you.

John Larsen
Owner

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WELL WATER CONNECTION, INC.
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Project Management & Technical Services

Our *Project Management Division* will assist you in the implementation of your ground water well project. . .

- Cost Estimating
- Estimate Procurement
- Site Study and Selection
- Permitting
- Water Well Design
- Estimate Analysis & Comparisons
- Specifications Design
- Water Analysis
- Pump System Design

- Feasibility Analysis
- Site Assessment
- Investigation Services
- Filtration Design
- Fracture Trace Analysis
- System Evaluation
- Pump Test Analysis
- VLF Geophysical Surveys

…while our *Technical Services Division* utilizes our own pump installation and service equipment, experienced crew and network of fully qualified and licensed water well and related professionals to get the job done right, on time and within budget.

- Artesian Wells
- Point Wells
- Gravel Wells
- Geothermal Systems
- Booster Pump Systems
- Pump System Diagnostics
- Pump Removal & Installations
- Water Sampling & Testing
- Zone-Fracturing
- Constant Pressure Systems
- Filtration Systems
- Hydro-fracturing

- Site Prep and Preservation
- Trenching
- Test Work
- Down Hole Video Inspections
- Pump Repair & Maintenance
- Locating Existing Wells
- Stain Removal Services
- Stain Prevention Systems
- Pump Testing
- Debris Removal and Containment
- Whole House Water Systems

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Residential Testimonials

"John is always courteous and professional and cares about customer satisfaction. A pleasure to do business with." **Jim Barry, Tewksbury, MA**

"We recently installed an irrigation well at our home in Randolph. After considering several companies, I selected Well Water Connection primarily because I was confident, after talking with John Larsen, that he and his company were competent, responsible and honest. John, Nancy and Mike thoroughly justified my confidence. The work was performed when and as promised and they were always responsive and pleasant to deal with. While actual well production is, of course, not predictable, we got a well with about three times the production that our contract called for, on time, at a fair price and within budget. I couldn't have asked for more."

Laurence Johnson, Randolph, MA

"John has been nothing but the best for us." **Chet and Joy MacAskill, Saugus, MA**

"WWC provided a complete turnkey solution -- coordinated the drilling, plumbing, electrical, and landscaping; also the town permit in advance and the water dept certification upon completion. John also kept my neighbors informed about the project, and kept their disruption to a minimum. The Foxboro Water Dept was pleased, my neighbors were pleased, and I was pleased (because he even came in under budget!)."

Arthur Barrett, Foxboro, MA

"John, great job and support. Give Henry some treats!" **Ralph Poirier, Reading, MA**

"John and Nancy were thorough, responsive and professional during all stages of our well project. John worked with us to customize our project over a period of time in a way that allowed us to move through the planning and installation stages comfortably and with confidence. We ended up with a terrific product for a fair price."

Lou DiFronzo, N. Reading, MA

"John has taken care of us since day one and doing a great job and going out of his way to take care of us. Thanx John!" **Chris Dowd, Weymouth, MA**

"We were building a house and were looking to install a well and John was recommended to us by one of our neighbors. I had already contacted a couple of other companies, but after meeting with John it was obvious he was the person we could trust. He took the time to provide us with all the answers to our questions so we could make an intelligent decision. He coordinated the entire installation from permits to the drilling, electrical, and plumbing. It has been two years and the system has worked great!!! I cannot say enough about our experience with Well Water Connection and we recommend them very highly." **Bob Bernard, Braintree, MA**

"Great job - we have been very happy!" **Bob and Betty Joyce, Franklin, MA**

"Three years ago I had a well drilled in my yard. The workings of the well were above ground, visible and ugly. Last Fall I saw a sign for Well Water Connection on the front lawn of a house. I called and got in-touch with John from Well Water Connection to see if there was anything that could be done with my well. John took a look at my well and came up with a plan that eliminated the unsightly well top. He redesigned the well head and now it is out of sight. John also set me up with a system that eliminates the staining of iron heavy water. Great service is what Well Water Connection is all about. I highly recommend them." **Joe Salvucci, Tewksbury, MA**

"I am satisfied with all your services, sales representative, installation team and office and service staff."

Mario Delvecchio, Braintree, MA

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Service Plans and Lifetime Warranties

A properly designed and installed *Water Well System* consists of several separate *systems* each made up of many different *components*, or *parts*. Each part is crucial and must work properly and in unison so that the entire system provides a clean, reliable and consistent source of water.

Shallow Well Jet Pump System & Tank System

Artesian Well Submersible Pump System & Mechanical Constant Pressure System

Artesian Well Submersible Pump System, Tank System & Water Treatment System

Artesian Well Submersible Pump System, VFD Drive System, Tank System & Water Filtration System

THE PROBLEM:

Every Water Well System is made up of parts from different manufacturers. Even if installed by a professional, most manufacturers will only warranty their parts for up to one year from the date of installation.

The manufacturer <u>will not</u> cover the labor costs that it will take to fix or replace that part. This could cost hundreds or even thousands of dollars in repairs and replacement parts if you have a problem, even within the first few years!

THE SOLUTION:

Well Water Connection, Inc. offers *Annual Service Plans* and *Lifetime Warranties* that include *Parts* <u>AND</u> *Labor*!

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What Does Your Water Cost?

2010 Water & Sewer Retail Rate Survey — **MWRA Advisory Board**

Combined Annual Water and Sewer Charges for Communities Receiving Services from the MWRA

2010

(Charges include MWRA, community, and alternatively supplied services
Rates based on average annual household use of 120 hundred cubic feet (HCF), or approximately 90,000 gallons)

	Water	Sewer	Combined	Change
Arlington (W/S)*	$517.10	$505.20	$1,022.30	15.4%
Ashland (S)	$408.40	$1,226.40	$1,634.80	6.3%
Bedford (S/partial W)	$503.00	$953.00	$1,456.00	6.4%
Belmont (W/S)	$688.56	$1,203.80	$1,892.36	6.7%
Boston (W/S)	$479.30	$616.53	$1,095.83	4.0%
Braintree (S)	$259.00	$734.40	$993.40	0.0%
Brookline (W/S)	$594.00	$822.00	$1,416.00	6.3%
Burlington (S)	$181.50	$371.50	$553.00	17.1%
Cambridge (S/partial W)	$380.00	$980.00	$1,360.00	6.1%
Canton (S/partial W)	$621.40	$736.40	$1,357.80	7.4%
Chelsea (W/S)	$469.20	$884.40	$1,353.60	10.5%
Chicopee (W)	$324.00	$592.00	$916.00	6.9%
Clinton (W/S)	$343.60	$257.70	$601.30	0.0%
Dedham (S/partial W)	$527.44	$969.60	$1,497.04	0.0%
Everett (W/S)	$181.20	$493.20	$674.40	0.0%
Framingham (W/S)	$529.08	$567.24	$1,096.32	8.8%
Hingham (S)	$918.98	$1,020.00	$1,938.98	0.0%
Holbrook (S)	$459.60	$774.00	$1,233.60	0.0%
Leominster (partial W)	$378.60	$385.40	$764.00	12.8%
Lexington (W/S)	$422.80	$838.40	$1,261.20	1.7%
Lynn (partial W)	$400.80	$736.92	$1,137.72	3.8%
Malden (W/S)	$452.16	$549.36	$1,001.52	1.6%
Marblehead (W)	$521.00	$752.00	$1,273.00	5.2%
Marlborough (partial W)	$609.60	$409.20	$1,018.80	0.0%
Medford (W/S)	$637.20	$912.00	$1,549.20	1.3%
Melrose (W/S)	$600.00	$987.12	$1,587.12	1.9%
Milton (W/S)	$603.60	$1,113.36	$1,716.96	5.1%
Nahant (W)*	$684.00	$949.20	$1,633.20	-1.4%
Natick (S)	$316.00	$951.20	$1,267.20	7.9%
Needham (S/partial W)	$483.00	$997.80	$1,480.80	0.0%
Newton (W/S)	$658.00	$932.00	$1,590.00	11.3%
Northborough (partial W)	$547.08	$632.60	$1,179.68	15.5%
Norwood (W/S)	$504.72	$741.10	$1,245.82	4.7%
Peabody (partial W)	$306.00	$409.80	$715.80	0.0%
Quincy (W/S)	$565.20	$928.20	$1,493.40	3.7%
Randolph (S)	$423.00	$740.20	$1,163.20	5.7%
Reading (W/S)	$963.60	$1,012.80	$1,976.40	4.6%
Revere (W/S)	$386.40	$1,206.00	$1,592.40	14.5%
Saugus (W)	$472.40	$344.00	$816.40	5.3%
Somerville (W/S)	$564.00	$815.58	$1,379.58	4.3%
Stoneham (W/S)	$516.00	$1,032.00	$1,548.00	2.4%
Stoughton (S/partial W)	$467.88	$1,064.40	$1,532.28	14.5%
Swampscott (W)	$812.00	$633.80	$1,445.80	4.8%
Wakefield (S/partial W)	$527.04	$1,019.52	$1,546.56	2.4%
Walpole (S)	$562.20	$759.26	$1,321.46	5.3%
Waltham (W/S)	$356.64	$664.32	$1,020.96	2.2%
Watertown (W/S)	$455.36	$871.20	$1,326.56	4.5%
Wellesley (S/partial W)	$434.28	$872.40	$1,306.68	5.1%
Westwood (S/partial W)	$527.44	$748.00	$1,275.44	0.0%
Weymouth (S)	$608.88	$877.40	$1,486.28	4.8%
Wilbraham (W)	$378.00	$492.00	$870.00	3.6%
Wilmington (S/partial W)	$449.60	$598.80	$1,048.40	2.2%
Winchester (S/partial W)*	$275.60	$313.20	$588.80	0.0%
Winthrop (W/S)	$598.80	$998.40	$1,597.20	0.0%
Woburn (S/partial W)	$205.00	$328.00	$533.00	-5.3%
Worcester (partial W)	$378.00	$485.76	$863.76	7.8%
AVERAGE	$489.95	$764.47	$1,254.42	4.6%

AVERAGE COST PER GALLON
$\$1,254 / 90,000 = 1.4¢$

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How Fast Your Well Pays for Itself

Let's say you now pay a **combined water and sewer charge of only 1.4 cents for each gallon of water you use on your lawn** (Average Combined Annual Water and Sewer Charges for MWRA Communities in 2010). You also have a typical **automatic sprinkler system** that runs twice a day - one hour each time. If the sprinkler system sprays 10 gallons of water every minute its on, (or 10 gallons per minute = $.14 per minute) in one hour it will spray 600 gallons (or 10 gallons per minute x 60 minutes = 600 gallons = $8.40 per hour). If you run your sprinkler system 2 hours a day that's 1200 gallons or $17 per day. During an average summer, if you use your sprinkler for 90 days you will spray 108,000 gallons of water onto your lawn. **At 1.4 cents per gallon you will spend $1,500.00 to water your lawn**.

Now, let's say you installed a water well and had it hooked up to your sprinkler system. **Instead of paying $1,500.00 per year to water your lawn, you don't pay anything.** That's right. **The ground water is free**, and because it will be used on your lawn there will be no sewer charge either!

The well is paying for itself! Instead of paying the water and sewer department for watering your lawn, you're making payments on a well that increases the value of your home and supplies water for years to come.

CALCULATE YOUR ANNUAL SAVINGS - EXAMPLE

Step 1: Calculate your COST PER GALLON. Find current "Combined Annual Water and Sewer Charge" on your latest water bill.

Step 2: Calculate your TOTAL WATER USE. See last years water bill(s) or add up all outside water uses including irrigation system, pool, washing cars, etc.

Step 3: Calculate your ANNUAL SAVINGS by multiplying your Total Water Use by your Cost Per Gallon. The following simple formula can be used if you have an automatic sprinkler system. The constant 54 is based on just 90 days of summer watering (60 mins per hour x 90 days divided by 100 pennies = 54).

54	X	Cost Per Gallon (in pennies)	X	Flow in gallons per minute	X	Usage in hours per day
54	X	1.4	X	10	X	2

ANNUAL SAVINGS = $1,500.00

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How Much Water Does My Sprinkler System Use?

ZONE #	# HEADS Per ZONE (A)	GALLONS Per HEAD Per MINUTE (B)	MINUTES Per CYCLE (C)	CYCLE Per DAY (D)	GALLONS Per DAY (AxB)x(CxD)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
				Total # Gallons Used Per Day (E)	

WATER & SEWER COST IN PENNIES PER GALLON? $_____ (F)

ESTIMATED DAYS PER MONTH RUN SPRINKLER SYSTEM? _____ (G)

ESTIMATED MONTHS PER YEAR RUN SPRINKLER SYSTEM _____ (H)

COST SAVINGS PER YEAR = ExFxGxH_____ = $_____

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Project Scope of Work Items & Time Line

Items / Tasks To Do	Time	Who
Site Survey / Feasibility Analysis / System Design	1-14 days	Well Water Connection, Inc. (WWC)
Generate & Submit Proposal	1-7 days	WWC
Proposal Acceptance	1-3 days	Client (C)
Plot Plan / Certified Engineering Plan	1-21 days	WWC / C / Surveyor or Engineer
Permit Procurement	1-45 days	WWC/ C / Board of Health (BOH)
Pre-Mark Site / Dig Safe Notification & Approval	3-5 days	WWC
Geophysical Investigation & Data Report	5-45 days	WWC
Test Hole - Soil Sampling & Preliminary Water Test	1-14 days	WWC
Site Preparation	1-3 days	WWC / Landscape Contractor (LC)
Well Drilling / Installation	1-3 days	WWC
Well Development & Testing	1-3 days	WWC
Hydro-fracturing / Zone-fracturing / Pump Testing / Water Test	2-7 days	WWC
Preliminary Pump / Filtration System Design	1- 14 days	WWC
Debris Removal / Trenching for Electrical / Water/ Offset Line	1-3 days	WWC / LC
Installation of Pad / Pump House for Pump System	1-5 days	WWC
Pump / Filtration System Installation	1-3 days	WWC
Electrical Conduit installed in trench	1-2 days	WWC / LC
Permitting / Wiring of Pump System / Electrical Inspection	1-5 days	WWC / Electrician (EC)
Backfilling of Electrical / Water Trench	1 -2 days	WWC / LC
Run / Test Pumping System & Controls / Water Tests	1-14 days	WWC
Connect Pump System To Irrigation System	1-2 days	WWC / Irrigation Contractor (IC)
Debris Removal / Clean-up / Final Landscaping	1-2 days	WWC / LC
Final Water Testing / Inspections / Approval of System for Use	1-21 days	WWC / EC / BOH

Notes: **Variables affecting the design, scope of work and timeline of the project include: offset distances to power source(s), voltage and phase available, operating pressure of the irrigation system, depth to water, type and number of well(s) (point, gravel or bedrock/artesian) and pump system(s) (shallow well, convertible or vertical jet, submersible or self priming centrifugal), operating controls (pump-start relay, tank/pressure switch, constant pressure controls (mechanical, VFD). With larger commercial well projects, a preliminary geophysical site survey and/or test well(s) is highly recommended to determine soil type, water levels, depth to bedrock, etc prior to the design and installation of any well(s).**

Please contact our office to discuss your particular project needs.

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Well & Pump System Ball Park Prices

Depth & GPM	10 GPM	15 GPM	20 GPM	25 GPM	30 GPM	35 GPM	40 GPM	50 GPM
20'-40'	$2,000 - $4,000	$3,000 - $6,000	$4,000 - $8,000	$4,000 - $8,000	$5,000 – $10,000	$6,000 - $12,000	$7,000 - $14,000	$8,000-$16,000
40'-60'	$3,000 – $6,000	$4,000 - $8,000	$4,000 - $8,000	$5,000 - $10,000	$5,000 - $10,000	$6,000 - $12,000	$7,000 - $14,000	$8,000 - $16,000
60'-80'	$4,000 – $8,000	$5,000 - $10,000	$5,000 - $10,000	$6,000 - $12,000	$6,000 - $12,000	$7,000 - $14,000	$8,000 - $16,000	$9,000 - $18,000
80'-100'	$4,000 - $8,000	$5,000 - $10,000	$5,000 - $10,000	$6,000 - $12,000	$7,000 - $14,000	$8,000 - $16,000	$9,000 - $18,000	$10,000 - $20,000
100'-150'	$5,000-$10,000	$5,000 - $10,000	$5,000 - $10,000	$6,000 - $12,000	$7,000 - $14,000	$8,000 - $16,000	$9,000 - $18,000	$10,000 - $20,000
150'-200'	$5,000-$10,000	$6,000 - $12,000	$6,000 - $12,000	$7,000 - $14,000	$8,000 - $16,000	$9,000 - $18,000	$10,000 - $20,000	$11,000 - $22,000
200'-300'	$6,000-$12,000	$6,000 - $12,000	$7,000 - $14,000	$8,000 - $16,000	$9,000 - $18,000	$10,000 - $20,000	$11,000 - $22,000	$12,000 - $24,000
300'-400'	$6,000-$12,000	$7,000 - $14,000	$8,000 - $16,000	$9,000 - $18,000	$10,000 - $20,000	$11,000 - $22,000	$12,000 - $24,000	$13,000 - $26,000
400'-500'	$7,000-$14,000	$8,000 - $16,000	$9,000 - $18,000	$10,000 - $20,000	$11,000 - $22,000	$12,000 - $24,000	$13,000 - $26,000	$14,000 - $28,000
500'-600'	$8,000-$16,000	$9,000 - $18,000	$10,000 - $20,000	$11,000 - $22,000	$12,000 - $24,000	$13,000 - $26,000	$14,000 - $28,000	$15,000 - $30,000

Notes: Variables affecting the design (and cost) of the project will include: offset distances to power source(s), voltage and phase available, operating pressure of the irrigation system, depth to water, type of pump system (shallow well, convertible or vertical jet, submersible or self priming centrifugal), operating controls (pump-start relay, tank/pressure switch, constant pressure controls (mechanical, VFD). With larger commercial well projects, a preliminary geophysical site survey and/or test well(s) is highly recommended to determine soil type, water levels, depth to bedrock, etc prior to the design and installation of any well(s).

The figures above represent the price range for one (1) successful well (point, gravel or bedrock/artesian) & pump system and are for budgeting purposes only. These prices may not include additional costs that may be necessary such as: permitting, design/engineering fees, site preparation, trenching and/or backfilling, electrical work, pump pads and/or pump housings, water treatment and/or filtration, water sampling and testing, drilling debris removal/re-landscaping/site restoration, plumbing and/or tying into an existing irrigation system.

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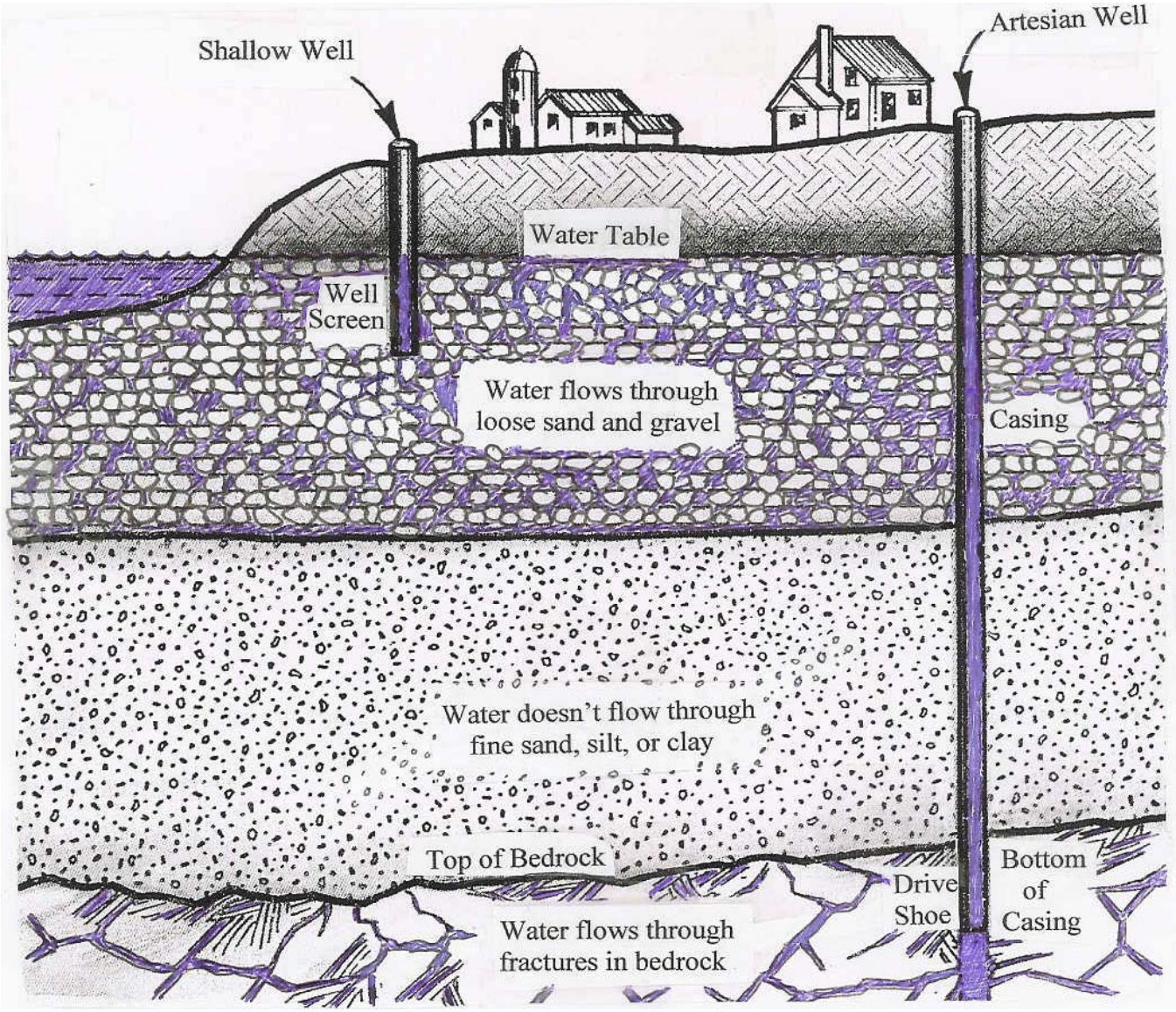
Bedrock "Artesian" vs. Shallow Wells



Shallow Wells rely on water that travels through spaces in loose sands and gravels. Because they are not very deep, they may be fitted with either surface mounted or submersible pumps and motors. Installation methods include driving a well point, wash and drive methods, or by auger. With this type of well, the depth to the water table and the type of soil encountered will determine how much water, if any, can be pumped from the ground.

Artesian Wells are generally deeper and fitted with submersible pumps and motors. With this type of well, a drilling rig is used to bore a hole through the soil and rocks and into solid bedrock that exists beneath your property. Steel casing and drive-shoe are then installed into the surface of the bedrock to provide a watertight seal and prevent soil, rocks and dirty water from entering the borehole. Drilling into the bedrock resumes without casing until the borehole intersects with fractures that exist naturally in the bedrock. This factor determines how much water, if any, can be pumped from the ground.

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How Point Wells and Gravel Wells Work

This simple demonstration helps explain how groundwater flows through different soil types and can be used to help understand the cause of localized flooding, wet basements, and even how shallow wells work.

To understand how groundwater flows from the ground and into point wells and gravel well (shallow wells), imagine you have a 5 gallon bucket. Now, imagine you fill it a third of the way with clay. Next, fill it another third of the way with silty, fine (like the beach) sand. Lastly, fill the bucket to the top with gravel and coarse sand. Now we have a bucket with three distinct layers of different soil types. Now attempt to fill the bucket with water by repeatedly dumping cupfuls of water into it. As you can imagine, the water will easily flow through the first layer of soil (the coarse sand and gravel). The water, when it reaches the second layer (the fine sand) will slow down, maybe even create a temporary puddle on the top of its layer that will disappear gradually as the water continues to seep downward.

When the water reaches the top of the last layer (the clay) it will stop flowing down and just sit there and on top of the clay. Eventually, some of the water will be absorbed by the clay while the rest sits on top. As we continue to dump water into the bucket, its level rises above the clay layer, slowly filling the layer of fine sand with water and pushing the air out at the same time. This process speeds up through the top layer of coarse sand and gravel until the bucket is full of only water and soil, as the air spaces between the grains of soil has been pushed out and replaced with water. Each layer of soil is now *saturated.*

Attempting to install a point well or gravel well is like putting a long straw into each layer of soil and trying to suck the water out. Intuitively, you can imagine how it can be done easily in a saturated layer of coarse sand and gravel.

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WELL WATER CONNECTION, INC.
Water Well Design & Project Management

The Process & Time Line
Point Wells

The *point well* is the simplest, most inexpensive type of well to install.

Unlike gravel and artesian wells (installed using very large, heavy drilling rigs), point wells can be installed using much smaller, lighter trailer-mounted equipment or even portable equipment we can hand-carry onto your property. The use of this portable equipment enables us to install wells where larger equipment simply can't get and eliminates other added costs associated with the use of large drilling rigs. Point wells are usually 1-1/4" to 2" in diameter, less than 40' deep and are fitted with either a simple pitcher pump or electric-powered surface-mounted jet pump.

Before installing a point well, we'll first test your property.




Each test hole location includes: Mobilization and Set up of all necessary Equipment; Installation and driving of *Galvanized Pipe*, *Couplings* and *Well Point* (including Johnson V-wire stainless steel screen) up to 40' deep; *Testing of* proposed well location(s); re-setting of drive pipe and *well screen* as needed and *Developing of the* proposed well with a temporary pumping system.

If a test hole is successful, your point well, complete with pump system will be installed…

The installation of a Goulds' professional grade shallow well jet pump system including pump, pressure tank, check valve, pressure switch, pressure gauge, hose spigot, 110v or 220v electrical plug, quick winterizing disconnects and other miscellaneous brass fittings.

The *Point Well* process (permitting, test work, pump installation, etc) can take several weeks depending on seasonal weather conditions and other factors.

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Shallow Well Jet Pump Systems

Our Shallow Well Jet Pump Systems utilize a pressurized tank and switch that turns the pump on and off automatically whenever you need water. In addition to feeding water to an underground irrigation system, an attached hose spigot will allow you to use the well water for hand watering flowers/gardens, washing cars, filling a pool and hosing off driveways, decks, lawn furniture, etc.

A typical Shallow Well Jet Pump System includes:

- Professional Grade Pump
- Pressure Tank
- Check Valve
- Pressure Gauge
- Isolation Valve for Irrigation
- Hose Spigot
- 110v or 220v Electrical Plug
- Quick Winterizing Disconnects
- Misc. Brass Fittings
- Artificial Rock Cover (optional)
- Sediment Filter (optional)

Shallow Well Pump Performance Ratings (Goulds)

HP/Model	1/2 HP – J5S					1/2 HP – J5SH						3/4 HP – J10S					1 HP – J10S					1 1/2 HP – J15S				
Nozzle	AN017					AN019						AN018					AN018					AN022				
Venturi	AD3332					AD3328						AD3336					AD3339					AD3342				
	Discharge Pressure - PSI					Discharge Pressure – PSI						Discharge Pressure – PSI					Discharge Pressure – PSI					Discharge Pressure - PSI				
Total Suction Lift (feet)	20	30	40	50	Max. Shut off (PSI)	20	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)
	Gallons Per Minute					Gallons Per Minute						Gallons Per Minute					Gallons Per Minute					Gallons Per Minute				
5	17.5	16.5	10.2	5.0	63	11.5	11.3	11.0	7.7	4.8	83	21.3	18.3	12.5	6.6	70	24.8	24.4	16.6	9.9	74	26.6	26.3	25.0	15.6	80
10	15.7	14.4	9.2	4.3	61	10.3	10.0	9.6	7.0	4.2	81	18.8	17.3	11.3	5.0	68	22.9	22.2	15.8	8.6	72	24.7	24.3	22.6	13.9	77
15	13.7	12.5	8.0	3.6	59	8.8	8.6	8.3	6.3	3.7	79	16.4	15.5	9.6	3.7	66	19.8	19.5	13.8	6.9	70	21.6	21.5	20.4	12.9	75
20	11.5	10.4	7.1	2.3	57	7.0	7.0	6.8	5.8	3.2	76	13.6	13.2	8.3	2.0	63	16.6	16.6	12.2	5.6	67	18.1	18.0	17.6	12.0	73
25	8.7	8.6	6.2	1.3	54	5.3	5.2	5.2	5.0	2.8	73	10.0	9.9	6.4	1.0	59	12.5	12.4	10.4	3.6	65	14.0	14.0	14.0	10.1	71

The final pump design (make, model, motor size & rating) recommended will be based on many variables, including but not limited to the depth and yield of the well, distance to the power source, the existing or proposed irrigation design and personal preferences you may have.

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Sediment Filters

Sediment Filters are an important part of any well. For *irrigation only* wells, they help protect the pump and irrigation system. For *whole house* water systems, filters help protect the pump, the heating system and the household appliances.

Clear View sediment filter with "Manual" flush valve for irrigation well
(Wayland, MA)

Clear View sediment filter including "Automatic" flush valve for irrigation well
(Canton, MA)

Pump Screen installed over submersible pump to limit intake of sediment from irrigation well
(Wilmington, MA)

Submersible pump sand separator for sediment isolation and removal from pump intake
(Hingham, MA)

1 micron bag filter for removal of fine sand and silt from irrigation well
(Hopkinton, MA)

Cartridge Filter to remove sediment from well in whole house water system
(Stoughton, MA)

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Disguise Your Well

Wishing Well custom-built on site for condominium association
Acton, MA

Well-head Cut Below Grade and installed in jumbo irrigation box with cover
Wilmington, MA

Screen custom-built on site for homeowner to hide Constant Pressure System
Concord, MA

Well , Tank & Electrical components hidden under Artificial Rock
Wayland, MA

Well head covered with Artificial Rock and finished with landscaping
Hingham, MA

5 hp 50 gpm Pumping System installed in insulated enclosure
Belmont, MA

Well, Pump, Sediment Filter & Iron Stain Prevention System under Artificial Rock
Braintree, MA

Four (4) Point Well Systems enclosed in insulated enclosures
Belmont, MA

Point Well installed in large irrigation box with cover
N. Reading, MA

Point Well and pump system hidden under Artificial Rock
Tewksbury, MA

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Artificial Rocks

Use of an artificial rock is a simple and effective way to blend your water well system and other needed components into your current landscape. This includes wellheads, pump and/or pressure tank systems, electrical components, filtration and/or iron stain prevention systems








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Zonefracturing


Constant Pressure Systems


Filtration Systems


Hydrofracturing

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Whole House Water Systems

Sediment Filters

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