



Merri Ann Simonson
YOUR INFORMATION SOURCE



SAN JUAN
ISLANDS, INC.

360.317.8668 • PO Box 100 • Friday Harbor WA 98250

ONE BOURBON, ONE SCOTCH AND ONE BEER

Unlike liquor, your water source in San Juan County is not guaranteed and must be acquired and cared for.

When you first consider purchasing an unimproved parcel of land you should condition your purchase upon a satisfactory water source. The days of clients purchasing land without the water source determined are long gone. Further, if one hopes to use institutional financing, the lender will require that the water source be acceptable in quality and quantity. Lenders will also require a valid septic system permit and access to an electrical power provider.

The majority of non-platted parcels in the San Juan Islands are serviced by individual wells. Most subdivisions offer access to a community water system, and some urban areas offer public systems.

Types of water sources in the islands include:

- Individual Private wells
- Shared well; 2 users. These systems should have a recorded shared well agreement with easements for maintenance and access. Depending on the volume, individual holding tanks may be required.
- Group B water system; 3-14 users. In the late 1990s, the County began managing the approval process for this group of water system. The County requires that the system have a maintenance agreement, access easements, a protection zone and regular testing with an assigned purveyor. The County requests the purveyor to submit a bacteria test annually and a nitrate test every 3 years to remain in "good standing". Prior to late 1990s, these were unregulated systems and some of the older systems have yet to be brought up to proper

standards. Hence, the importance of confirming with the County that the system is in “good standing”. These systems typically have a base monthly charge plus a fee based on your use and surcharge for heavy use.

- Group A water system; 15 plus users. These systems are larger providers such as Roche Harbor Water or the Town of Friday Harbor. The system’s reports are reviewed by the State and must comply with the State’s requirements for maintenance, testing and notifications. The hook-up fee in the town of Friday Harbor is currently \$11,392 and the fee for Roche Harbor Water is \$9,600. These hook-up fees do not include the installation cost for connection to the main sewer lines or storm water management systems. Again, these systems have a base monthly charge plus a use fee.

Drilling a New Well

If purchaser is considering buying unimproved land, it is prudent to ask for the seller to drill the well, in a mutually agreed upon location, at seller’s expense. Depending on the purchase contract, if the well is satisfactory to the purchaser, the seller may be reimbursed for all, part or none of the well drilling expense.

Well drilling runs about \$15.50 - \$20.00 per foot and the average depth of wells on the island is approximately 350 feet. Once you add the pump, pressure tank, water lines, power, holding tank, filters, and a modest well house, etc., the check is written in the range of \$20,000-\$25,000.

If the proposed well site is within 1000 feet of the shoreline, an entire list of regulations must be complied with which will add to the cost of your well installation. If the proposed site is within 50 feet of a lot line or public road, variances may be required from the neighboring properties.

Quality and Quantity Testing

A purchase contract should also contain a provision for satisfactory quality and quantity testing. Those tests include a bacteria test for \$100 and a San Juan Short test for \$200. The County requires a satisfactory San Juan Short list prior to the issuance of a building permit so it has become the standard test for new and existing wells.

The San Juan Short is inorganic testing for arsenic, barium, fluorides, sodium, electric conductivity, chloride and nitrates. Both of these tests must be sent to laboratories for analysis. The San Juan Short takes up to 21 days.

The laboratory reports provide you with a notation regarding the actual levels for each of the 7 contaminants and whether they pass or fail is based on meeting acceptable levels set by State or EPA. As a REALTOR, I have personally been involved in several transactions on San Juan that failed the tests; several with barium and one with arsenic.

The good news is with today's technology, there are filter systems that can address the majority of the water contaminants. Just add more money to your budget and most problems can be fixed. Hard, soft and even "stinky" water can be remedied with various treatment systems. Salt water intrusion on the waterfront properties, remains as one of the most difficult problems to resolve.

We recommend the two firms listed below for drilling, water testing, and they also provide purveyor services for community systems. Mauldin's Well Service 360-378-6975 and Martel's Well Drilling 360-378-2842.

When the well is drilled, a well log will be generated that indicates the well depth and an air test that will indicate the quantity. This typically satisfies a buyer for evidence of quantity.

Well Production

The County has a minimum quantity requirement in order to issue a building permit. Individual wells must produce at least 200 gallons per day. A shared well and a Group B system must produce 800 gallons per day per hook up.

The Town of Friday Harbor indicates that the typical household (4 persons) uses an average of 133 gallons per day. The National consumption average is 100-150 gallons per day. The requirement of 200 gallons per day for an individual well is a form of protection to buffer water use and not stress the wells.

Well Fracturing may increase production rates but it can also pose a risk to surrounding wells in the area. Well interference from drilling a new well or fracturing can be a problem and the rule that applies is "**first in time – first in right**". In the event a well interferes with a prior neighboring well, the property owner of the well that interferes must take precautions to insure that the first well has the quantity they had prior to the second well being drilled. Those precautions could include pump depth relocation, holdings tanks, restriction valves and off-peak holding tank fills such as during the night time.

Finding a copy of the original well log to confirm quantity is a good approach to evidencing quantity as the alternative is to process a draw down test. This test can place a well at risk if it already had the potential for salt water intrusion. You can find a

copy of the original well logs by visiting the Department of Ecology web site per the link below and searching by tax parcel number or well head ID number.

<http://www.ecy.wa.gov/programs/wr/wells/wellhome.html/>

If the well log is not found and the buyer of your home insists on knowing the quantity of the well, which is a reasonable request, a property owner must face the decision of processing a draw down test. Certain times of the year, draw down tests on waterfront property can pose risk of salt water intrusion so it would be appropriate to consult with your favorite well service provider. During a draw down, precautions are taken within the process. Basically the provider would draw the well down using only the top 50 feet of the well. They would use on-site litmus paper to test for chlorides and sodium before, during and after the flow test. They would stop immediately if the chlorides or sodium levels change. They will only process the draw flow until the volume reaches an amount above the minimum quantity requirements for the single or shared well. There is no point in pressuring the well above the County requirements. A drawn down is typically for 2.5 hours.

Other Water Source Options:

Alternative water sources can include a roof catchment system, although lenders frown on them, and the holding tank requirement is very large. Another option is hauling water into a holding tank, but again, financing the home would be a challenge. Costly desalinization water plants are an option for community subdivisions near the waterfront. Rumor has it, if you are using water from a D-sal plant, be sure to take your multi-vitamins as the process strips the water of elements we all need in our systems.

Permits

Permits are required and the well driller must coordinate with the septic designer to allow for adequate setbacks from each system. If you fell in love with a challenging lot and you have to factor in setbacks from the waterfront, Indian midden or wetlands into the equation, the entire process will become “character” building and more expensive than ever. The base Archeology study starts at \$3,000 and wetland delineations start at \$2,600 subject to the typing and amount of survey work required. A Residential Pre Application (RPA) which determines your setback from the waterfront starts at \$1,000 (including the consultant) and is not binding so if the regulations change, the RPA may no longer be valid.

Maintenance

A homeowner should maintain their water systems regularly, similar to how we handle our septic systems. The bacteria tests should be processed annually and a San Juan Short every few years. Periodically, the well systems need to be flushed with a mild bleach solution. The holding tanks need to be monitored for tight seals; bugs can access the tank from the smallest openings. You should have an annual inspection for both the poly and concrete tanks and clean, as needed. Expect to replace a pump about every 10 years and filters as recommended by the manufacturer.

Conclusion

If you are purchasing an existing home, the water system should be tested or if it is a Group system, the status confirmed to be in “good standing”. A telephone or email to the San Juan County Health department will provide you with the “good standing” confirmation or lack of. The County also has a website with the status of all group systems.

Again a Bacteria and a San Juan Short are the tests of choice for new or existing private and shared wells. A well log is preferred over a draw down test.

Water throughout the world is a precious commodity. It must be used wisely and maintained properly. Humans can't survive on liquor alone.

This article is for informational purposes only and not intended to be all inclusive of everything you should know about water systems in San Juan County.

Written by:

Merri Ann Simonson

Coldwell Banker San Juan Islands Inc

simonson@sanjuanislands.com