

Water system synopsis fact sheet

1. **Water Rights:** Washington State granted water right. Below are direct quotes from Marie Peter, Department of Ecology. (Full text was read at the PSA BOD meeting on May 31, 2008)
 - a. "Paradise Estates must file a Proof of Appropriation form by November 1, 2011 if water is in full beneficial use. If water is not in full beneficial use by that date, PSA will need to request an extension.
 - b. When evaluating a permit for extension, The Department of Ecology investigates current water use and determines whether water is being developed diligently and used beneficially. Wasteful practices are a violation of the water code. Failure to repair excessive system leakage may jeopardize the good standing of the water right permit. It may also result in denial of further extensions or enforcement action. If an extension is denied, Paradise Estates will lose the ability to develop additional quantities of water under the permit."
 - c. "it is a simple matter to align your water permit with the 2017 water meter requirement, however in 2011, you must show progress and a plan for the proper water conservation and water use set forth by Ecology."
 - d. Department of Ecology recommendation: "Using equation 5-1 of the Department of Health's Water System Design Manual, an Average Daily Demand of approximately 355 gallons per day (gpd) per connection is expected for your system. Although a maximum annual quantity of 450 gpd per connection was allocated under your water right, this quantity may not necessarily reflect beneficial use. It is ultimately YOUR responsibility to demonstrate that your community is using water efficiently and according to the terms of your permit."
 - e. "To ensure the continued good standing of your permit, we recommend that Paradise Service Associates recalculate per connection water based on source meter readings."
2. **Water Use Efficiency Rule** (Department of Health as regulated by Washington State Legislature passing of the Municipal Water Law in 2003): By July 1, 2009 PSA must have submitted service meter installation schedule (has been completed via our SWMPS). First annual performance report is due: July 1, 2009. Meet 10% leak standard based on 3 year average. Within 3 years of installing service meters. (See Water right certification determination above)
3. **Water Meters:** The State of Washington requires the installation of water service meters by 2017. However, keep in mind that the Department of Ecology is requesting water use data by 2011 in order to extend our water permit if we request to do so.
4. **Allowed Water Connections:** Currently the Dept. of Health, Office of Drinking water allows 167 total water connections. The PSA Articles of Incorporation states that the board is responsible for providing water to ALL properties. The data to determine the allowed water connections is out of date and possibly inaccurate. The ODW can reassess our water use to give us a new/updated allowable water connection number for \$300. The fee from NW Water Systems to aid in this is \$3500 and would update the SWMPS and would show we have the system with engineering data to support the requirement. **Water Usage gpd-Current:** NW Water System conducted a non-official re-assessment of our per connection usage: "I did a brief calculation of Average Daily Demand for Paradise Estates. It appears as though your average daily use is 465 gpd with peak usage somewhere around 1,300 gpd. This is much higher than would be expected for your community." –Todd Krause
5. **Safe and healthy water:** Frank Meriwether DOH, ODW recommends and supports full upgrade to ensure proper water pressure, cross connection contamination and back flow suppression, all necessary to ensure safe water.
6. **Engineering:** two engineering firms (GoDat and JB Engineering) were hired by PSA a few number of years ago. And currently Norhtwest Water Engineering. All 3 companies concluded that the pipes and in the ground and volume now are too small to supply water to all 228 lots with sufficient pressure to be legal or to supply sufficient fire flow. "I would like to remind you that Paradise Estatels must look at an uptgrade to the distribution lines. Number one; the existing line sizes are too small to provide fire flow capability, and number two; the ASBESTOS CEMENT pipe (in the 4" mains) may cause a health risk to some of your water system customers. (Howard GoDat Consulting Engineers)
 - a. Engineer recommendations: 1. Distribution mains shouel be upgraded to 6" for fire flow standards. Any AC and undersized pipe should be replaced at total build out. 2. Install blowoff assembly on all dead end

lines. 3. Program for operating the blowoffs & hydrants once a year. 4. Install service meters for conservation program and phase in a "pay for what you use program". 5. Cross connection control program for the community area or other potential contamination source. 6. Auxiliary power supply for all pumps (this is NOT included in our current bid, but could be added at later date). 7. Remote sampling stations if needed.

7. **Fire suppression:** Mason County ordinance 14.18.040 Existing residential development. This requires existing water systems to adhere to the Interim Fire Flow Standards when performing a major upgrade. Putting new pipes in the ground is considered a major upgrade. Adding service meters only does not. Full text of the Mason County Interim Fire Flow standard can be found at:
<http://www.co.mason.wa.us/code/commissioners/index.htm>
 - a. The Mason County Fire Marshal's office conducted a flow test on the existing hydrants serving your water system on Thursday, June 12, 2008. The upper hydrant served by the pressure system was not tested. It's flow is limited by existing booster pump capacity to approximately 300 gpm. The hydrant near the reservoir cannot provide the minimum 20 psi under any conditions and is considered a drafting hydrant. The three hydrants near the lake are able to supply approximately: 310 gpm (south hydrant), 350 gpm (middle), and 425 gpm (north hydrant) at 20 psi.
 - b. Mason County recommends a minimum of 500 gpm at 20 psi for firefighting purposes. If the old distribution system is to be retained, we recommend painting the approximate capacity of each hydrant on the hydrant cap. Please double check with the Fire Marshal's office to be sure your hydrants are painted the correct color so that the Fire Department will know that they are substandard hydrants.
8. **Sate approval of System Upgrade:** June 13, 2008 announcement of the arrival of the PSA water distribution and booster upgrade APPROVAL letter, from DOH, ODW, dated June 9, 2008. Specifically addressed to: Reginald Hearn, Northwest Water Systems, Inc (NWS) from Washington State, Department of Health, Southwest Drinking Water Regional Operations, Regional Engineer Frank Meriwether. Paradise Service Associates, (PSA), corporation for the Paradise Shore Estates water system, under the contracted management by NWS, is given authorization to proceed with the replacement of the entire water distribution system, along with booster station upgrades, (located on the North Well site), as detailed in the DOH,ODW letter, dated June 9, 2008. This letter, along with permit fee, and construction completion documents will be hand delivered to the NWS office, located in Port Orchard, WA, on June 13, 2008, by Larry Pazaski, PSA Board and Water committee member.
9. **Financing:** Low interest money is not available through grants or the SRWF. Two board members and one community members investigated financing through the state revolving fund; See attached document by NWS. Mid-Long term financing via commercial banks are being procured by the PSA treasurer/BOD. The membership voted in 2007 at the annual meeting to be given 1 of 3 choices This referendum offers the following options:
 1. To pay additional assessments in cash when required to meet water plan payment requirements.
 2. Obtain a personal loan to pay a monthly fee to a 3rd party (i.e. Key Bank) and pay cash to the Association when required to meet water plan payment requirements.
 3. Defer to the Association to negotiate a loan on behalf of all members needing this service (The Association may be able to negotiate a better loan rate).
10. **2006 Assessment vote:** Excerpt from the approved 2006 PSA Annual Meeting:
"...P.S.A is working with JB engineering and the state to become an Individual Water Company. This would eliminate the need to apply every six years to the State of Washington to be able to pump more water into the system. The proposal package to complete this project would be over a six year period and could cost as much as \$700,000.00. It would be completed in two phases. Phase one would be build out of well three, with pump, pump house, electrical connections and transmission lines. Phase two would include connections to new fire hydrants and water meters. The purpose of the water meters would not be to charge for water use, but to chart total water use and monitor for line breaks. Two other phases were mentioned. No details were given. Payment options for the above proposal were discussed: A one time payment of \$3,000.00 or \$600.00 per year for the next 6 years, (\$50.00 per month). Operations management charges are in additional to these costs. The following options are available to members:

1. Vote no on the budget. Result: Board will cancel contract with JB engineering. Rescind application with State of Washing to become an Individual Water Company. No upgrades will be conducted on well #3. The water system would then be taken over by a public utility as directed by the State for non compliance.
2. Vote yes on the budget. Result: The board would continue with JB engineering, become an Individual Water Company and proceed with upgrades.

A discussion ensued on the budget, the ballot issues and the above proposals, the quality and quantity of the system, ballot procedures, and cost of publicly contracted water system vs. a privately held water system, as well as State compliance issues and possible fees for new construction. The proposed 2006 budget was passed by majority vote." Rick Galvin adds that during his presentation of the budget for approval he said: - I want to clarify the minutes of the 2006 Annual Meeting. In my Treasurer Report and specifically the explanation of the proposed Water System Upgrade Assessment I presented the following:

*** Water Assessment Assumption - 228 Lots Assessed**

1/3 of members will choose to pay one-time payment of \$3,000.00	(75 x \$3,000.)	\$ 225,000.00
2/3 of members will choose to make six annual payments of \$600.00	(153 x \$600.)	\$ 91,800.00
First year estimated Water Assessment collections		\$ 316,800.00
Future estimated collections - five additional years annual \$600. payments	(5 x 153 x \$600.)	\$ 459,000.00
		\$ 775,800.00

This water assessment is only a good-faith projected estimate based on current preliminary proposals to establish a new third well with connection lines to current storage facility, replace all existing distribution lines up to owner property lines and add new service meters to each residence. Actual final water system construction costs are subject to change and any related future water assessments will be determined as required. You will see the above referenced "First year estimated Water Assessment collections" of \$316,800.00 identified as the Water Assessment revenue in the approved 2006-2007 budget. It was clearly stated this was an estimate and that final construction cost are subject to change.

11. **Articles of Incorporation:** Article VI, Section 4: "This corporation is hereby empowered to levy assessments against its members for the cost of improvements it deems necessary and proper for maintenance of the properties and services of the corporation, and to specify terms of payment therefor...."
 - a. Article V, Section 21. : This corporation may enter into and make any lawful contracts and incur liabilities and obligations essential to the transaction of its affairs for the purposes for which it is formed. It may borrow money at such rates of interes as the corporation may determine, issue bills, notes, bonds and other obligations or evidence of indebtedness, and secure the same by mortgage or pledge of all or any of its property, franchises and income as its bylaws may provide..."

Pros and cons?

Situation	Result
<p>Pipe size Our current pipe sizes are too small (Ref JB and GoDat)</p>	<p>Results in low water pressure at full or less than full build-out. Less than 30psi is illegal and considered a health risk. Once less we are close to 30psi, we will no longer be able to service the customers and may not be able to go to full-build out as well as be in violation of code.</p>
<p>Current system is partially gravity fed and has no back flow suppression.</p>	<p>New system would be all pressurized and contain proper back flow suppression, thereby providing adequate pressure at all times. All but eliminating the risk of contamination.</p>
<p>Leaking lines/needing repair. Asbestos Concrete Mains. (Ref JB or GoDat Eng)</p>	<p>Leaking lines and repairs of those lines can lead to harmful contamination. Asbestos lines will become brittle and break and will lead to asbestos contamination of our water.</p>
<p>Conservation</p>	<p>State of Washington Department of Health and Department of Ecology are enforcing Washington State Law as it pertains to water systems with more than 15 active connections: we must adhere to not more than 10% leak rate. We must install service meters by 2017 but must prove full beneficial use of our water by 2011.</p>
<p>Cost of Future Repairs</p>	<p>As history has dictated all future costs associated with repairs and maintenance will only rise. In the past, PSA committee members and board did much of the repair work to our water system. They are now aging and the new generation will not be doing those repairs. That only means 1 thing. Increased costs associated with an aging system.</p>
<p>Fire Suppression</p>	<p>A new system would require new fire hydrants every 500 feet. Since our fire department is partially volunteer, having fire hydrants that have sufficient flow will better enable them to put out costly fires. If this is not done, it opens the Association to law suit.</p>
<p>The Cost of Now or Later</p>	<p>Doing the upgrade now ensures the least expensive method to perform the upgrade per lot. Interest rates are low, contractors are looking for work and the water committee and board have saved the community tens of thousands of dollars by expending their own time and expertise.</p>