

To: Whatcom County Council

Date: January 25, 2014

Subject: Water Supply Issues or? Can you do the Math?

Referenced from "The nexus between land-use planning and water resource management", Dec 2013 "White Paper", produced by the Washington State Ground Water Association.

The Ecology "written rule (WAC 173-518) for the Dungeness River Area in Clallam County addresses the water resource implications" for a single domestic well system. This includes "drilling of a source well, the building of a dwelling with appropriate plumbing and the construction of an on-site waste disposal system (septic drainfield)."

In WAC 173-518 Ecology "defined the 'consumptive' use for a single domestic water system's indoor use to be about 15 gallons per day (gpd) based on a 90% return flow".

The "white Paper" uses simple examples explaining that if you "have 10 new rural homes, the consumptive use would be 150 gpd. One hundred homes would consume 1500 gpd." You can ramp up the numbers as you wish, but this is simple math.

Now, what if you deny these rural homes on county property and force the applicants to move to a city? The 10 applicants will now be living on some type of supplied water source. With supplied water there is generally no return flow. The now treated supplied water is returned downstream in the river or directly to the bay. These 10 applicants would now be using 1500 gpd rather than the 150 gpd and there would be no return to the county's natural water supply. In turn, the 100 homes forced into the city are using 15,000 gpd rather than 1500 gpd as again there is not return flow to the natural water supply.

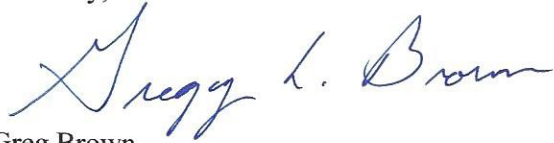
The table that follows shows the water savings for the single use well vs supplied water in the city. It also shows that only about 4.2% of the current water being drawn from our water supplies is from single use wells.

Water Users	# Households	Water Used (gpd)	Difference (gpd)	% Ex Well to Supplied
Exempt Well Owner	1	15	135	10%
Supplied Water User	1	150		
Exempt Well Owner	10	150	1,350	
Supplied Water User	10	1,500		
Exempt Well Owner	100	1,500	13,500	
Supplied Water User	100	15,000		
City of Bellingham	32,000	4,800,000		
City of Ferndale	8,000	1,200,000		
Other Supplied Users	28,000	4,200,000		
Totals	68,000	10,200,000	9,750,000	4.2%
Exempt Wells	30,000 ea.	450,000		

Exempt Well Owner – Well, Home and Septic System w/90% Return Flow per WAC 173-518
Supplied Water User – Water supplied by City or Water Districts, etc. to process, 0% Return Flow to natural source
Household = 2.5 people per house divided from population estimates
Exempt Wells estimated 30,000± from DOE Files

In summary, is attacking less than 10% of the water supply the answer to addressing future water issues? If you are going to save water wouldn't you try to address the systems that only marginally conserve or return flow? How can forcing individuals from exempt wells with septic drain fields with 90% return flow, to only minimal return flow make any sense? Unless it's not about the water...

Sincerely,

A handwritten signature in blue ink that reads "Greg L. Brown". The signature is written in a cursive style with a large initial "G".

Greg Brown
Whatcom County