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**To:** Water Policy Interim Committee  
**From:** Montana Association of REALTORS®  
**Date:** May 27, 2008  
**Re:** Cost comparison on exempt wells and public water supply systems

During the April 2008 Water Policy Interim Committee ("WPIC") Meeting, Sen. Elliott requested that the Montana Association of Realtors ("MAR") obtain and provide to WPIC figures on costs to install public water supply systems versus costs to use exempt wells in subdivisions of varying sizes. Sen. Elliott also requested that MAR provide information on whether, after installation, individual wells are the responsibility of the individual homeowners or of the developer of the subdivision. This memorandum is in response to Sen. Elliott's requests.

### **Costs for Public Water Supply Systems vs. Individual Wells**

Any discussion of the costs comparisons between public water supply systems and individual wells for housing developments must consider three key cost components: initial installation and any attendant infrastructure, permitting, and ongoing monitoring and operation costs. At the October 24, 2007 WPIC meeting in Choteau, Eric Regensburger of the Montana Department of Environmental Quality made a presentation to WPIC entitled "Costs and Uses of Community Wells vs. Single Family Wells." In that presentation, Mr. Regensburger provided an excellent summary of the installation and infrastructure costs and ongoing monitoring and operation costs over 20 years associated with both public water supply systems and individual wells for subdivisions varying in size from five lots to 500 lots and with well depths varying from 50 feet to 500 feet. MAR has no reason to quibble with Mr. Regensburger's figures and, for ease of reference, provides them to the committee herewith. Although Mr. Regensburger's figures provide a good overview of the costs of installation and, in the case of public water supply systems, attendant infrastructure, as well as ongoing monitoring and operation costs, the figures do not include permitting costs. Of course, individual wells have minimal permitting costs. However, with a public water supply system, particularly in a closed basin where mitigation may be required, permitting costs can be substantial.

During the 2007 Legislature, MAR provided both House and Senate Committees considering House Bill 831 with an outline of tasks and costs associated with obtaining a beneficial use permit for a public water supply system. In particular, MAR provided a cost comparison among an uncontested permit application where no mitigation is required and when mitigation is necessary in both a small (40 to 50 lots) subdivision with un-complex geology and in a large subdivision (100+ lots) and/or deep wells in complex geology. These costs (including consulting and driller fees and the permit application fee) ranged from \$43,100 on the low end to upwards of \$350,600 on the high end. None of these estimates encompasses the costs associated with a contested case proceeding (both legal and consultant costs), which can be significant depending upon the number of objectors and the substance of the objections. Conservative estimates range from \$10,000 for a relatively simple and quick contested case (e.g., one to five *pro se* objectors on water quantity issues only and a final decision from DNRC that is not appealed to the district court level) to upwards of \$75,000 for a contested case with numerous objectors represented by legal counsel maintaining objections on both

water quality and quantity issues and a final decision from DNRC that is appealed to at least the district court level.

**Responsibility for Wells**

Sen. Elliott also requested that MAR provide WPIC with information on the entity with continuing responsibility for individual wells – the homeowners or the developer. Typically, where individual wells are used, the wells and attendant water rights pass to the individual lot owners upon purchase, and the lot owners then become responsible for compliance with all applicable state and local regulations, as well as any applicable provisions in the covenants, conditions, and restrictions for the subdivision. Conversely, where a public water supply system is used, developers often either form a water and sewer district for the subdivision and pass title of the system and attendant water rights to that district or simply pass title to the homeowners' association, which must then operate the system according to all applicable state and local regulations, as well as any applicable covenants, conditions, and restrictions or bylaws for the governing entity.

MAR looks forward to presenting this information in more detail at the upcoming June WPIC meetings.

# **COSTS AND USES OF COMMUNITY WELLS vs. SINGLE FAMILY WELLS**

*Presented:*  
October 24, 2007  
Choteau, MT  
WPIC

*Presented by:*  
Eric Regensburger  
Department of Environmental Quality  
444-0916  
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## **TOPICS**

- **Deciding on the appropriate type of water system for a subdivision**
- **Where are community wells appropriate?**
- **Connecting to an existing public supply**
- **Comparison of costs: Community vs. single family (i.e. individual) wells**
- **Resource impacts of high flow wells vs. multiple small flow wells**

## DEFINITION

- **PUBLIC WATER SYSTEM**
  - Serves 25 or more people or 15 or more connections for 60 days or more per year.
  - Community (e.g. town)
  - Non-transient, non-community (e.g. school)
  - Transient, non-community (e.g. restaurant)
- **MULTI-USER WATER SYSTEM**
  - 3 through 14 living units or commercial structures, total population cannot exceed 24
- **Community = multi-user/public system (for purposes of this discussion)**

## WHAT IS THE APPROPRIATE WATER SYSTEM

- **For lots 1 acre and larger:**
  - Decision is up to the developer
  - Must meet DEQ rules and circulars
  - DEQ cannot dictate type of water system if rules are met
- **For lots over 20,000 sq. feet and under 1 acre:**
  - must have either community water or wastewater
- **For lots 20,000 sq. feet (approx ½ acre) or less:**
  - Must have both community water and wastewater

## **WHERE ARE COMMUNITY WELLS APPROPRIATE?**

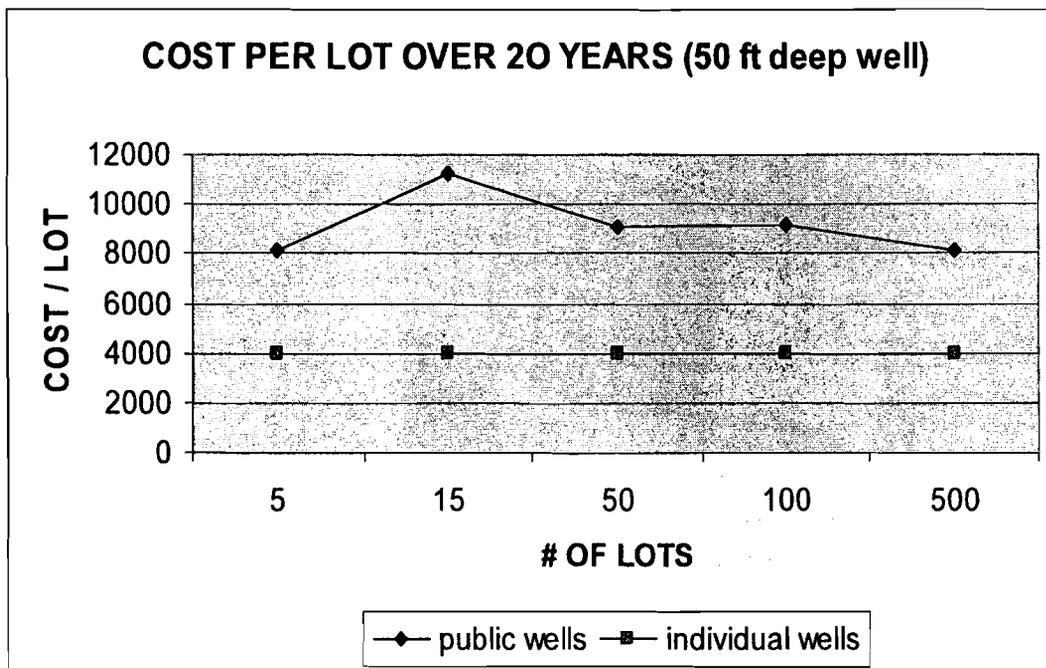
- **Community wells can be used on just about any subdivision, but:**
  - **With larger lots, infrastructure becomes more expensive and complicated**
  - **Aquifer can be limiting factor (low yield wells)**
  - **Slow build-out of subdivision can result in water quality issues due to dead ends and stagnant water**
  - **Can developer afford up-front costs**

## **CONNECTION TO AN EXISTING PUBLIC WATER SUPPLY**

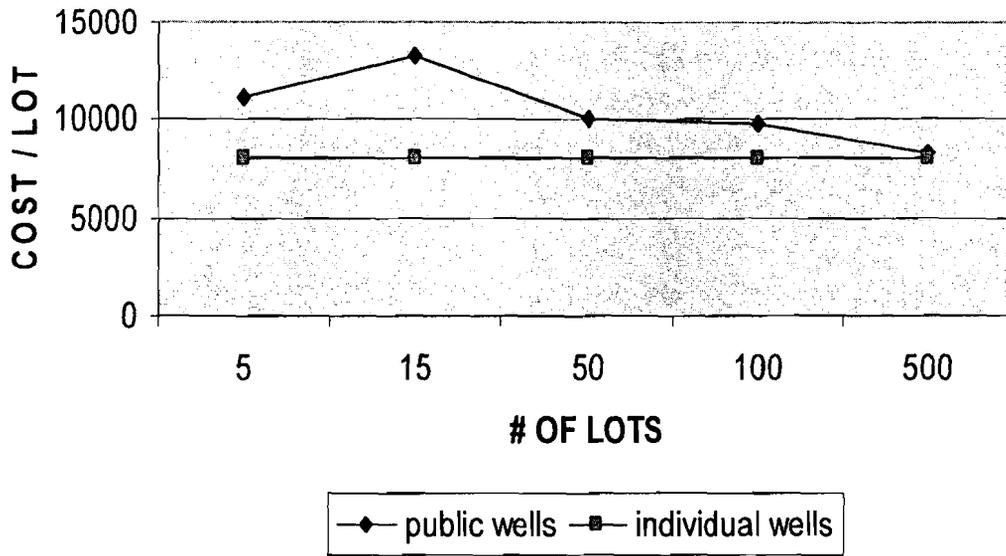
- **Rules require connection to existing public system within 500 feet of a proposed subdivision, unless:**
  - **The cost to connect is >3x the cost as compared to an approvable on-site system;**
  - **Connection is limited by a physical obstruction;**
  - **Connection is limited by unobtainable easement; or**
  - **Public system wont allow connection**
  - **Doesn't apply to existing multi-user system**
- **Cost to design and build water connection is initially borne by developer**
  - **Up-front costs incorporated into lot prices**

# COSTS OF COMMUNITY vs INDIVIDUAL WELLS

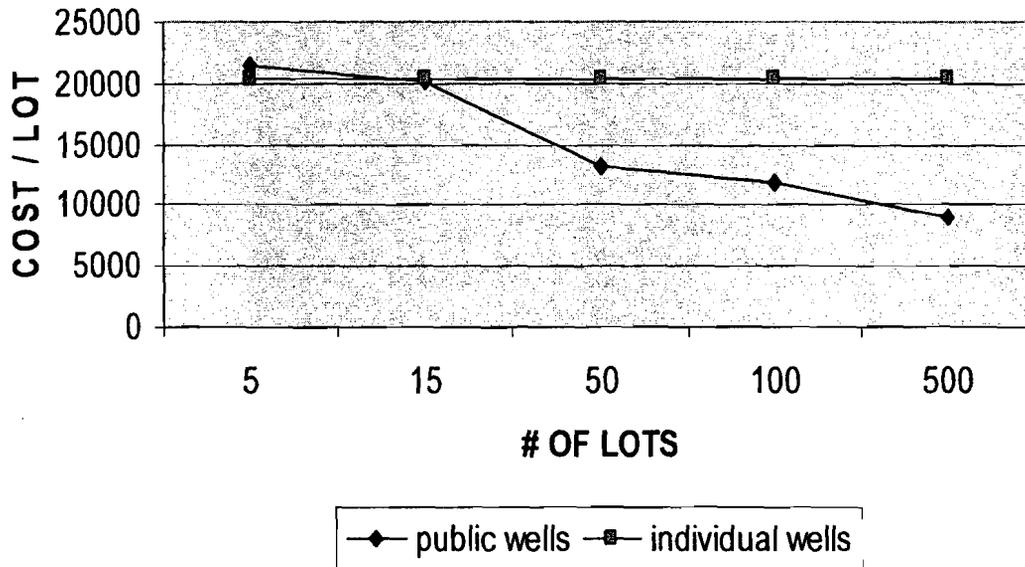
Well Depth (feet)	# LOTS	MUTLI FAMILY / PUBLIC WATER SYSTEM											
		# Wells	Drill + Pump (\$150/Ft) <sup>1</sup>	Infrastructure <sup>2</sup>	Monitoring + Operator (year) <sup>3</sup>	Total	Total (20 years)	Cost / Lot (20 Years)	# Wells	Drill + Pump (\$30/Ft) <sup>4</sup>	Monitoring + Operator	Total	Cost / Lot (20 years)
50	5	1	\$7,500	\$33,000	\$0	\$40,500	\$40,500	\$8,100	5	\$20,000	\$0	\$20,000	\$4,000
50	15	2	\$15,000	\$84,000	\$3,500	\$102,500	\$169,000	\$11,267	15	\$60,000	\$0	\$60,000	\$4,000
50	50	3	\$22,500	\$362,500	\$3,500	\$388,500	\$455,000	\$9,100	50	\$200,000	\$0	\$200,000	\$4,000
50	100	4	\$30,000	\$815,000	\$3,500	\$848,500	\$915,000	\$9,150	100	\$400,000	\$0	\$400,000	\$4,000
50	500	6	\$45,000	\$3,925,000	\$3,500	\$3,973,500	\$4,040,000	\$8,080	500	\$2,000,000	\$0	\$2,000,000	\$4,000
150	5	1	\$22,500	\$33,000	\$0	\$55,500	\$55,500	\$11,100	5	\$40,000	\$0	\$40,000	\$8,000
150	15	2	\$45,000	\$84,000	\$3,500	\$132,500	\$199,000	\$13,267	15	\$120,000	\$0	\$120,000	\$8,000
150	50	3	\$67,500	\$362,500	\$3,500	\$433,500	\$500,000	\$10,000	50	\$400,000	\$0	\$400,000	\$8,000
150	100	4	\$90,000	\$815,000	\$3,500	\$908,500	\$975,000	\$9,750	100	\$800,000	\$0	\$800,000	\$8,000
150	500	6	\$135,000	\$3,925,000	\$3,500	\$4,063,500	\$4,130,000	\$8,260	500	\$4,000,000	\$0	\$4,000,000	\$8,000
500	5	1	\$75,000	\$33,000	\$0	\$108,000	\$108,000	\$21,600	5	\$102,500	\$0	\$102,500	\$20,500
500	15	2	\$150,000	\$84,000	\$3,500	\$237,500	\$304,000	\$20,267	15	\$307,500	\$0	\$307,500	\$20,500
500	50	3	\$225,000	\$362,500	\$3,500	\$591,000	\$657,500	\$13,150	50	\$1,025,000	\$0	\$1,025,000	\$20,500
500	100	4	\$300,000	\$815,000	\$3,500	\$1,118,500	\$1,185,000	\$11,850	100	\$2,050,000	\$0	\$2,050,000	\$20,500
500	500	6	\$450,000	\$3,925,000	\$3,500	\$4,378,500	\$4,445,000	\$8,890	500	\$10,250,000	\$0	\$10,250,000	\$20,500



**COST PER LOT OVER 20 YEARS (150 ft deep well)**



**COST PER LOT OVER 20 YEARS (500 ft deep well)**



## **IMPACTS OF HIGH FLOW WELLS vs MULTIPLE LOW FLOW WELLS**

- **Amount of water use per home in community system could be reduced due to per gallon cost of water**
- **Distribution/location of wells can effect impacts to nearby resources (e.g. surface water)**
- **Using community wells often means higher density than with individual wells**