Shortcomings in Water Supply Planning

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Introduction

The present system of water policy and water supply planning contains several inherent flaws. This section briefly outlines some of the shortcomings and mentions alternative approaches. Like the remainder of this paper, this section is not intended to be exhaustive.

Failure to Consider Private Water Rights

Present water policy, as practiced in most states, gives no more than lip service to private water rights. Planners treat the water resource as a public good that they can access at will and at no cost. In reality, rights to use water have, since the inception of our country, been private rights.

This disjunction leads to several anomalies. First, the public water supplies (usually either public service authorities or local governments) consider only large water supplies, such as rivers and high volume wells. The large number of private wells, while not individually supplying great amounts of water, provides a huge source of water in the aggregate. Granted, calculated the amount and availability of this water proves to be much more difficult than more conventional public water supplies. However, failure to consider these sources both distorts the planning process and ignores the law.

In addition, ignoring private water rights leads to difficult court battles. When a locality and another locality or a state and state dispute water rights, the court has no principled way to resolve the dispute. Since governmental units or public service authorities hold no water rights

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separate from land ownership in most cases, no law exists to mediate disagreements. Note that due to the prohibition against "lift" in some common law rules, public water suppliers often hold inferior rights to that of the landowner, if the public supplier holds any rights at all.

Finally, if states truly hold the water in trust for the public, then local governments and public service authorities lack the ability to sell the water for profit, as is presently the case.

Many local governments use the profits from water sales to subsidize costly sewer service. If the state holds the public trust, then local governments have no right to engage in this proprietary, money-making activity.

Failure to Consider Private Water Wells

Private wells spread the impact of ground water withdrawals by drawing water from aquifers at different depths and from scattered locations. This effect reduces the adverse consequences of the cone of depression. Dramatic drawdowns from high volume wells can cause subsidence and dry wells. In addition, use of private wells, when combined with on-site waste treatment systems, promotes recharge to the location from which the water is withdrawn.

Private wells produce water for commercial/industrial use that does not contain chlorine. Wells are especially desirable when chlorinated water is neither needed nor desired. Some manufacturers cannot use chlorinated water for their processes, and when forced to use chlorinated treated water they incur additional costs for removing the chlorine.

A large factor favoring private wells is cost. Private wells are cost effective when compared to public water systems. The average cost for a well is $5,000, with a life expectancy of 40 years. A pump and tank last about 20 years. If you include the cost of a

replacement pump and tank, the cost is $6,500. Electricity costs are minimal, and the monthly cost of well water would average $12-13 per month.

The average cost of connecting to public water is $3500. Add to that the $750.00 average cost of running a line to the home. The cost of purchasing the meter adds another $8-$9 per month creating an average user fee of $34-39 per month. Finally, public water suppliers may increase water rates without citizen control or input.

These costs make public water unaffordable for agriculture and other businesses that use large quantities of water in production processes. In Lynchburg, Virginia, repairs to a private well forced a steel manufacturer to temporarily convert to public water. The cost of public water to the business amounted to $18,000 for two weeks.

Finally, private wells provide a water supply that is not likely to be deliberately contaminated. Public water systems are vulnerable to attack by terrorists. The deliberate contamination of one large system can affect millions. Smaller systems are no less vulnerable because there are no safeguards that will adequately protect a public system from contamination.

The Planning Units Are Inappropriate

Most water supply planning occurs at the local, regional and state levels. In each case, the planners define the planning area by using arbitrary jurisdictional boundaries. Neither ground nor surface water abides by political boundaries.

Across the country, the federal government funds watershed planning projects and encourages states to do regional water resource planning. However, in Virginia, for example, local governments and public service authorities insist that water supply planning be based on jurisdictional lines. Local governments demand control over

immediate water supply as well as water resources for future use. Profit motives undoubtedly motivate these demands. The nature of the water resource makes planning at a much broader scale necessary. In addition, the many impacted stakeholders should be afforded meaningful participation.