

May 24^h, 2016



To: Clark County Councilors & Community Planning, Clark County WA.

Subject: Review of GMA Options & FEIS done for GMA-Preferred Alt. Process.

From: Richard Dyrland, Supervisory Federal Hydrologist, retired

Dear Councilors & Community Planners Staff,

I have done additional reviewing of the online version of the **Final Supplemental EIS** and other related **GMA Documents** which are on the Clark County web site. Again, I focus on additional water aspects.

The water chapter information has ignored discussing in appropriate depth, the critical limiting factors of both water rights and future water supply.

At this past Tuesday evening public presentations on GMA, hydrologist/geologist Dennis Dykes gave key information about the existing and impending water rights problems that impact current agriculture and also existing rural homes and potential methods of rural home building expansion. We already have serious issues in some areas of the County along with increasing numbers of failed wells. Dennis also pointed out the high cost and lack of feasibility of extended supply to rural areas from Clark PUD.

The other major factor, water supply, and particularly groundwater, is already being negatively impacted by higher rates of runoff largely due to less infiltration of rainfall and snowmelt. Much of this is due to poorer infiltration related to increased road systems, increased direct drainage to streams & tributaries, heavy timber cutting, and more land clearing for rural homes and home clusters. In addition, more wetland areas are being encroached upon despite the fact that the County should not be giving building permits for these areas ---yet they are. Obviously we have a serious internal problem in some of our County Departments.

Groundwater levels vary by watershed because geology and surface/subsurface conditions vary. We are "mining" our groundwater at an increasing rate. The fantasy of "don't worry, we have the Troutdale Aquifer" so we are good for 50 years is just plain unscientific and irrational thinking and planning for where we are today. To switch from shallower aquifer wells that are going dry, into the deeper Troutdale and other deeper aquifers has limitations too. They include much higher costs both drilling and operating, water rights issues, and increasing rates of drawdown while recharge from infiltration is declining at an increasing rate. Studies of long-term stream records in Clark County and those done on runoff delivery rates by the US Forest Service on the Gifford Pinchot National Forest substantiate these concerns. We don't need to repeat the mistakes of other regions who have ignored growing water concerns, until the cost of a "fix" is very high and the options as to what can be done are relatively few.

My evaluation of the FSEIS is that with its present content, it is not an adequate document and it gives you very little substantive analysis on the impacts of alternatives as found in the "Options & Impacts (Alternatives)" document. That omission of key discussions as well as in-depth valid qualitative analysis of impacts, whether the impacts are direct, indirect, cumulative, induced, or connected actions ---does not provide the help you need for evaluating key options for land zoning and other related designations in rural areas. **Please do not support the reduction of parcel sizes, but be conservative till you have much more adequate data and information regarding the short and long-term effects of various existing and potentially new options.**

Respectfully, Richard Dyrland

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