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To: Dan Breedon

Fr: Ed Miller

Subj: Literature applicable to the Housing Element

Ref A: The World Watch Institute 25th Anniversary Edition, 2008 State of the World, W.W. Norton 2008

Ref B: Log Homes Magazine May 09, pp66-68, Modest Scale home examples such as www.realloghomes.

Ref C: Natural Home Magazine, Top 10 Green Cohousing Developments, Jan/Feb 09

Ref D: Natural Home Magazine, Sustainable in the Sierras, Mar/Apr 09 pp42-49

Ref E: Neighbor Law; Fences, Trees, Boundaries & Noise, Cora Jordon 2002 (Butte Lib 346.7304)

Ref F: David Goodstein, Out of Gas, The End of the Age of Oil, W.W. Norton 2004 (Butte Lib 333.8G)

Ref G: The Nation, 4 essays on Reimagining Socialism, 4/23/09, pp 15-20. In particular, the essay by Bill McGibben on p17 is of special interest to Butte County.

Ref H: Sustainable Land Development Today, Papers on Mining Wastewater and Solar Power on Rails, Vol 5 #3, Mar 2009

Comments:

1. Ref A is an excellent overview of the role of innovation in achieving a sustainable Economy. Pp 138-179 is directly applicable to the Housing Element.
2. Ref B describes log home development over a wide range of scales. Overcoming problems of non-uniformity of wall width, expansion and handling of log materials in contrast to more conventional construction methods are described. Thermal averaging benefits needs to be evaluated using methods suggested in Ref A.
3. Ref C examines the combined benefits of cohousing and LEED construction methodology.
4. Ref D examines the benefits of OSB structural foam
5. panels in a typical Sierra rural environment.
6. Ref E looks at the short strokes of minimizing conflict with neighbors. Hopefully the Butte County Planning/enforcement Departments can provide some useful insights in this area.
7. Ref F Provides another world view of the need for mitigating the effect of reduced oil availability.
8. Ref G provides a good overview of the political ferment that has the potential for shaping the housing element. We need to keep on top of Bill McGibben and the www.350.org website

membership (Largest global grassroots organization driven by climate change) who envision a renewed sense of community and expansion of small scale agriculture in the coming decades.

9. Ref H p 6-9 provides an overview of on-site reuse of waste water and water polishing that looks at the relative size of the materials (In the .001 to 1000 um range) of interest and the processes for separation. Aside from the "yuck factor", the practical issues of cost effective contamination avoidance/water treatment will need to be examined since water availability is a critical development bound. P 24-25 provides an overview of urban mass transit options.

Candidate tools for housing developers:

1. Average and quasi-worst case deg-days by Q91/450 acre areas or iso-contour lines for heating and cooling in Butte County.
2. North side heliostat heating performance for our nominal 40 deg latitude region and obscuration.
3. Tolerable heat sink temperature roll-off as a function of time-of-day.
4. Typical heat pump performance using geothermal sources vs. altitude.
5. Installation and expected performance for built-in south-side solar cooking ovens.
6. Small cogeneration/CHP systems and heat transfer efficiency up to 1000 feet.
7. Small production water well nominal/worst-case performance and multi-year trends/correlation with rainfall statistics.
8. Typical submersible and distribution pump characteristics of AC and DC systems.
9. Water storage requirements based on typical demand and minimal emergency lighting/refrigeration requirements and a solar PV-only emergency source of energy.
10. Wind statistics by quad or iso-contour and expected resulting performance for small-scale energy production.
11. Vegetative burning or bio fuel production troposphere/water contamination allowable limits.
12. Irrigation performance/efficiency by common Butte County soil types.
13. Initial and end-game salvage credit.