Tuesday, April 21, 2009 (file cac209)

To: Dan Breedon

Fr: Ed Miller

Subj: Sources of guidance for the general plan update

Ref A: N. Dawidoff, The Civil Heretic, How did Freeman Dyson, the world-renowned scientist and public intellectual wind up opposing those who care most about global warming, New York Time Mar 09 and subsequent notes to the editor.

Ref B: P. Flatdemean, Deer Cabin Reverie, Authentic Camp Living, Arch Digest June 2008, pp 140-147, 205

Ref C: PBS Frontline, Puget Sound and Chesapeake Bay face perilous conditions caused by contamination, KIXE April 21, 09, 9-11PM

Ref D: PBS Nova, Car of the Future, KIXE April 21, 09, 8-9PM

Ref E: A Weisman, The World Without Us, Thomas Dunde Books, St Martin's Press 2007

Ref F: Green Roofs, National Geographic May 09

Ref G: Cellulosic biomass and Biodiesel, Denman Forestry Series, Apr 22, 09, 3-4 PM

Global Warming Mitigation: Per Ref A, Dyson's primary contribution to this field is a calculation that showed that one trillion additional trees would return the atmosphere to pre-industrial CO2 equivalent levels. He also notes that shifting climate patterns are not necessarily undesirable. This position is opposed to Gore, Hansen and other advocates of a massive short term response. From the Butte County point of view, the trade-off between expanded vegetation and increased wildlland fire susceptibility and water expenditure need to be examined. Michael Pollan (U.C. Journalist) continues to advocate close-in, minimum till practices and small scale processing that need to be weighed against the larger global warming backdrop. His concern about excessive use of carbohydrates, subsidies for corn/soy and synthetic nitrogen are in some ways analogous to Dyson and Lomborg who are concerned that specialists are leading us down the primrose path involving inappropriate expenditure of GNP.

Cabin Design: Per Ref B, The Architectural Digest lowers it aim to a small summer cabin in a 15 acre parcel. This could be a useful model for many Butte County stakeholders in high end economic brackets or DIY projects leading to energetic retirement living who want to live within the constraints of a 20 acre minimum subdivision parcel.

Contamination: Ref C rails against intensive unregulated agricultural practices, unbridled land subdivision policies and impermeable surface contamination of aquifers/estuaries. The treatment is exhaustive and dramatic. People in Washington State complaining about "takings" that limit exploitation of property by restrictive land use policies may find local resonance. Watching people lined up at

grocery checkout stands with two 5 gallon carboys of potable water derived from reverse osmosis, state penalties for Sacramento River contamination, known/unknown contamination of local aquifers are signs of the time.

Mobile vehicle efficiency: Ref D in a humorous vein led by the PBS Tappet brothers and Lovins from the rocky Mountain Institute hammer on the need for efficiency and new skill sets as we transition to less dependence on foreign petro-resources using cellulosic sources that do not impact food supplies. Many of the examples are simplistic. Lovins made a strong case can for the use of high performance carbon fibers to reduce vehicle weight while maintaining crash impact safety.

Post-human earth: Ref E is a thought experiment that Einstein would appreciate that goes well beyond typical thinking about sustainability. Massive oceanic dead zones from plastics/polymers are a typical hyperbolic concern. Whole new physics, procreation modification and doomsday research are examined. Archeological evidence of the roots of collapsing civilizations and parallels to contemporary trends are emphasized.

Green Roofs revisited: Ref F looks at worldwide efforts on green roofs.

Cellulosic Biomass Research: Current work on cellulosic breakdown at number of research institutions were reviewed in Ref G. Brewer's yeast modified by gene splicing is being emphasized at U. of Washington. Phenol poisoning from woody structures is a dominant problem.

Biodiesel utilization per Ref G is being limited by variation in the bulk modulus/viscosity/ignition properties of biodiesel that are different from petro-diesel. Modification of injectors or preprocessing may be required to control contamination and maintain efficiency. Discussions with local VW representative indicate that at the present time, they are not recommending more than 5% biodiesel be added to petro-diesel in normal operation.