

Friday, January 09, 2009 (file cac183)

To: Dan Breedon

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Subj: Progress toward a sustainable society

Ref A: Worldwatch Institute Report on progress toward a sustainable society, W. Norton 2009

Ref B: S. Scherr et al, Farming and land use to cool the planet, loc cit pp 30-49, cross indexes 62 primary references pp212-215

Background: Parties to the Kyoto protocol are preparing for negotiations in Copenhagen in late 2009. It is likely that the U.S. will become involved in this meeting. The amount of literature being generated with a focus on GHG mitigation to control global warming is overwhelming. Ref A & B and the 62 cross references of Ref B put a major emphasis on land use that could affect Butte County. It is possible that individuals in Butte County will switch from denial to depression without stopping off at "maybe we can solve this planetary problem by 2030". Hopefully the general plan will encourage people to examine tractable issues for which they have control. Ref B lists the following land use GHG emissions that can be contrasted with the El Nino 97-98 wildland fire input of 2100 million tons of carbon.

| Land use | Annual Emissions (CO2 equivalent in millions of tons) |
|---------------------------------|-------------------------------------------------------|
| Soil fertilization | 2100 |
| Cattle food digestion | 1800 |
| Biomass burning | 700 |
| Rice anaerobic decomposition | 600 |
| Livestock manure | 400 |
| Other (irrigation delivery etc) | 900 |
| Deforestation | 8500 |
| Livestock veg consumption | 5900 |
| Total | 15000 |

Soil near the land surface that contains mobile carbon is estimated to contain 1600 billion tons of which 540-610 billion tons is in living vegetation. Deep within the earth there are trillions of tons of carbon including fossil fuels.

Potential implications for Butte County:

1. Encourage minimal tillage practices
2. Encourage farming systems that absorb carbon in soils
3. Encourage organic farming approaches that minimize the use of inorganic fertilizers
4. Encourage the use of perennial vegetation
5. Encourage home energy assessments to gather the low hanging fruit

Side comments:

1. Our science guru Donald Kennedy recommends that we listen to Naomi Oestres of the UCSD History department while looking for the endless frontiers of research being performed by peer reviewed teams. UCTV has been airing repeatedly this last week a lecture by Oestres in late 2007 that reviews the history of global warming studies and the political activities of the George Marshall center in creating confusion re effects of tobacco, the strategic defense initiative and global warming. Fine tuning of the global warming model should not be interpreted as a belief by the scientific community that global warming is not a fact and mitigation is worth a shot by 2030.
2. The January 7, 09 ER 3B notes that green building appears to be stalling in many areas. The Galleries in Phoenix and Scottsdale is an exception. They are offering LEED certified homes with radiation filtering windows, Energy Star rated appliances and well insulated fiber reinforced cementitious walls at 9% below their appraised value and believe that they can provide a reasonable return on investment at this level.