

Sunday, November 23, 2008 (file cac174)

To: Dan Breedon

Fr: Ed Miller

Subj: Further literature search on min-ranchettes/urban residential agriculture/niche farming, general ecology and agro ecology

Ref A: City of Sunnyside WA, Urban residential agriculture (URA-Mini-Ranchettes) zone. The current version is available from [www.ci.sunnyside.wa.us](http://www.ci.sunnyside.wa.us) or from Google on subject of Mini-ranchettes derived from Code publishing ([http://www.codepublishing.com/WA/Sunnyside/Sunnyside/Sunnyside\\_171...](http://www.codepublishing.com/WA/Sunnyside/Sunnyside/Sunnyside_171...))

Ref B: American Farmland Trust: The future is now: Farmland at the tipping point?  
(<http://www.farmland.org/programs/states/futureisnow/default.asp?gclid=CKfzrr2...>)

Ref C: Wildlife conservation board, Oak woodlands conservation program,  
([http://www.wcb.ca.gov/Pages/oak\\_woodlands\\_Status.asp](http://www.wcb.ca.gov/Pages/oak_woodlands_Status.asp) )

Ref D: E. Callenbach, Ecology, U.C. Press 2008 (Butte County Lib 517C)

Ref E: L. Ryszkowski, Landscape Ecology in agroecosystems management, Dec 2001 Amazon.com

Ref F: H. Flores, Food not lawns: How to turn your yard into a garden and your neighborhood into a community, Amazon.com Oct 2006.

Ref G: T. Fujimoto Cal Poly Pomona, Urban growers go high tech, Nov 23, 08 ER sec 2B

Background: Per your memo of 11/19 I have been looking for literature and talking to a small scale retired kiwi farmer about the issue of conflict with mini-ranchettes in Butte County. Ref A specifically gives an example of a zoning specification for urban residential agriculture applicable to Sunnyside Wa. The only anomalous item was the specification of a minimum of 1200 ft<sup>2</sup> that I believe should be a maximum. The minimum parcel area was 1 ac. Ref B voices concern that mini-ranchettes and urban sprawl are reducing agricultural efficiency and total production capability. A detailed analysis of mini-ranchettes in the 1.5 to 10 ac class was performed for Stanislaus, Merced, Madera and Fresno counties. No consideration was given to Butte County. Nineteen counties were viewed in generality based on maps showing 15.6 Mac of Ag land, 5.4 Mac high quality land and 3.2 Mac of prime land. They indicated that 700,000 ac were urbanized and 900,000 ac are predicted to be urbanized by 2040. Ref C examines threats to the 10 million ac of oak woodlands in California. Special interest for Butte County is the statistics for the Sierra Nevada foothills oak woodland section. This 2.1 million acres consist primarily of blue, black, interior live and some valley oak in the 200 to 5000 ft altitude range with precipitation in the range of 8-40 inches. Sudden oak death syndrome has not become a major problem. Stand replacement fire, small ranchettes, firewood cutting and poor regeneration have been a problem. Ref D is the latest revision of this classic book on ecology that describes current knowledge about the complex relationships with living things that can lead into current agricultural applications given in Ref E. Ref F

provides a tool for marginal resource/idealistic stakeholders who need guidance on successful vegetable garden siting and preparation. This brings to mind the image of Eleanor Roosevelt planting a vegetable garden on the White House lawn. Ref G describes the potential for hydroponic growth of plants. The hydro is somewhat misleading since mechanically stable inert substrates such as sponges and shredded coconut shells are also candidates for hydroponic gardening.

Implications for Butte County:

1. The Sunnyside Urban residential agriculture zone model may be useful for applications described in section 5 of e-mail Cac172r.
2. Per my retired kiwi niche farmer consultant, the minimum parcel area is largely dependent on the soil quality. He has observed that in Butte County a 5 acre parcel is often typical but 1 acre parcels can be viable on a commercial scale. Greenhouses/hydroponic gardens attached or closely associated with dwellings need not be specially zoned but have a potential for home use or a limited commercial market.
3. Using the analysis technique of Ref B we should try to assess the distribution and effectiveness of URA/equivalent zoning of parcels. The range of interest appears to be 1 to 40 acres with the range 1.5 to 10 acres broken out for comparison to the Ref B studies.
4. Higher altitude CHP/cogeneration sites have the potential for extending the growing season and enhancing growth from nominally waste heat and CO<sub>2</sub> in greenhouses.