

APPENDIX A
WATER USAGE CALCULATIONS
CASGEM PROGRAM

1. Use CaDWR Land Use Data, 2001 (2005 reportedly complete but not currently available).
2. Concantonate fields CLASS1 and SUBCLASS1 as CROP_CODE.
3. Dissolve using fields WATERSOURC and CROP_CODE.
4. Add fields:

IrrigSource	Text
Acres	Double
Crop_Name	Text
IrrigRate	Float
IrrigAmt	Float
5. Complete IrrigSource from WATERSOURC

Surface	1
Combined	2
Groundwater	3
Recycled	6
Other	7
6. Complete Crop_Name from CROP_CODE using the CaDWR metadata
7. Calculate Acres
8. Fill in IrrigRate based on Appendix B of Lake County Water Demand Forecast, 2006.
 For IrrigSource of "Combined", use average of surface and groundwater irrigation rates.
 Assume IrrigRates for non-listed crop types as:

Flowers, nursery and Christmas trees	2.18
Urban Landscaping, etc.	5.0
Other non-listed fruit trees	Same as pears
9. Calculate IrrigAmt as Acres x IrrigRate
10. Clip merged land use file with each groundwater basin
11. Recalculate Acres and IrrigAmt
12. Combine dbf files into single Excel spreadsheet. Calculate totals for Acres, Irrigated Acres, Irrigation Amount and Irrigation Amount by IrrigSource (sort by IrrigSource and Crop_Name).

13. Estimate Domestic Rural Demand based on 148 gpcd and Census 2000 population intersected by groundwater basins. Total rural demand comes from Lake County Water Demand Forecast, 2006.
14. Prepare Summary worksheet. Incorporate M&I demand from Lake County Water Demand Forecast, 2006.

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