

EWG's methodology step-by-step : Glenn-Colusa ID

■ Step 1:

Acquire county-level pesticide use report (PUR) data for those counties covered by Glenn-Colusa.

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"MAYFLOWER FARMS", "BRADFORD", "PETE", "1441  
GRIMES-ARBUCKLE RD.", "ARBUCKLE", "CA", "95912-  
", "0600176", 29136, "TOMATO  
PROCESS", 74.40, 74.40, "DUAL MAGNUM  
HERBICIDE", 9.3000, "GA", 26, "13N", "01W", "M", "05/08  
/2001"
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"MAYFLOWER FARMS", "BRADFORD", "PETE", "1441  
GRIMES-ARBUCKLE RD.", "ARBUCKLE", "CA", "95912-  
", "0600176", 29136, "TOMATO  
PROCESS", 74.40, 74.40, "GOWAN TRIFLURALIN  
5", 9.3000, "GA", 26, "13N", "01W", "M", "05/10/2001"
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"RICHARD PIERCE", "PIERCE", "RICHARD", "6754  
GREENBAY  
RD.", "ARBUCKLE", "CA", "95912", "0601180", 28035, "PA  
STURELAND", 9.33, 2.50, "TRANSLINE", 1.0000, "PT", 22,  
"13N", "02W", "M", "05/12/2001"
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"RICHARD PIERCE", "PIERCE", "RICHARD", "6754  
GREENBAY  
RD.", "ARBUCKLE", "CA", "95912", "0601180", 28035, "PA  
STURELAND", 9.33, 7.50, "TRANSLINE", 3.0000, "PT", 22,  
"13N", "02W", "M", "05/13/2001"
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■ Step 2:

Identify all farms residing in GCID using Geographic Information Systems (GIS).



California Water Districts

This directory contains datasets pertaining to the water districts in California. All datasets are in 1:24,000 scale, UTM projection. The datasets are:

- * wdfed24 - Federal Water Districts for California, 1:24,000 Scale
- * wdpr24 - Private Water Districts for California, 1:24,000 Scale
- * wdst24 - State Water Districts for California, 1:24,000 Scale

This directory also contains FGDC-compliant metadata in both HTML and XML formats for the above datasets.

■ Step 3:

Calculate total acreage for each crop type on each farm.

Year	Permit	Cnty	Permittee	City	Total Harested Acres
01	0600220	06	VANN BROS.	WILLIAMS	X
01	0600216	06	EMERALD FARMS	MAXWELL	X
01	0600209	06	CANAL FARMS	MAXWELL	X
01	1100056	11	KNIGHT FARMS	GLENN	X
01	0600033	06	T&P FARMS	ARBUCKLE	X
01	0600295	06	LAGRANDE FARMS	WILLIAMS	X
01	0601022	06	T AND P FARMS JOINT VENTURE	ARBUCKLE	X
01	1100077	11	R & D FARMS	ARTOIS	X
01	0601115	06	KALFSBEEK, JOE	COLUSA	X
01	1100200	11	PARISIO BROS, PARISIO FARMS	Willows	X

- Step 4:

Take known district-level water consumption rates for 2002.

Divide this amount of water among the farms in a given water district according to crop acreages and crop water use figures.

Water Use by Crop and Hydrologic Region (acre feet/acre per year)			
Crop type	Sacramento River		
	Min	Max	Avg
Grain	0.6	2.5	1.6
Rice	4.0	7.9	6.0
Cotton	-	-	-
Sugar Beets	2.8	4.4	3.6
Corn	2.4	3.5	3.0
Other field	1.8	2.9	2.4
Alfalfa	2.6	4.9	3.8
Pasture	3.9	6.1	5.0
Tomatoes	2.6	3.5	3.1
Other truck	0.7	2.7	1.7
Almonds/pistachios	2.6	3.6	3.1
Other deciduous orchard	2.6	4.2	3.4
Subtropical orchard	2.4	2.9	2.7
Grapes	1.3	3.1	2.2

- **Step 5:**
Calculating the subsidy: How much are farmers paying for all this water vs. what the water really costs.

Water rates	Description	Dollars per acre foot
"Contract" rate	Glenn-Colusa's water rate under current long-term contract with the Bureau of Reclamation.	\$2.00
"Full cost" rate	Bureau's calculated water rate for GCID that includes water delivery costs and capital repayment with interest from 1982 onwards.	\$22.12
EWA rate	Average price of water sold to the Environmental Water Account during 2000-2003. (Range: \$75 - \$360 per af)	\$129.48
Replacement water rate	Estimated cost for new water supply (significant underestimate)	\$170.42

Results of analysis: Top GCID subsidy recipients (2002)

Farm Name	Estimated amount of CVP water purchased in 2002 (acre-feet)	Federal "full cost"	Subsidy rate calculated at	
			Cost to state Environmental Water Account	Cost for replacement water supply
CANAL FARMS	2,242	\$13,000 to \$45,000	\$250,000 to \$290,000	\$350,000
KNIGHT FARMS	1,699	\$10,000 to \$34,000	\$190,000 to \$220,000	\$260,000
R & D FARMS	1,502	\$13,000 to \$30,000	\$170,000	\$240,000
PARISIO BROS, PARISIO FARMS	1,435	\$15,000 to \$29,000	\$170,000	\$230,000
T AND P FARMS JOINT VENTURE	1,349	\$14,000 to \$27,000	\$160,000	\$210,000
CHRISMAN FARMS	1,277	\$16,000 to \$26,000	\$150,000	\$210,000
A & M Farms	1,232	\$14,000 to \$25,000	\$150,000	\$200,000
VANN BROS.	1,193	\$3,500 to \$24,000	\$130,000 to \$150,000	\$180,000 to \$200,000
K. & R. FARMING	1,122	\$16,000 to \$23,000	\$140,000	\$180,000
SUTTON BROS	1,045	\$15,000 to \$21,000	\$130,000	\$170,000
MONTZ FARMS	960	\$16,000 to \$19,000	\$120,000	\$160,000
KALFSBEEK, JOE	951	\$16,000 to \$19,000	\$120,000	\$160,000
KNOWLES, CLARK AND TOM	897	\$16,000 to \$18,000	\$110,000	\$150,000
LAGRANDE, S.B.L.	829	\$16,000	\$100,000	\$140,000