

Attachment: Example Calculations for Determining Exceedance of Agency-Wide Cap.

Example 1.

During a dry year, an Oxnard Plain grower grows two celery crops, and bunched vegetables on a 100-acre farm. This grower may grow celery from August through November, and another celery crop from December through April, and then grow bunched vegetables (i.e. spinach).

Crop Name	Crop Type	IA in AF/acre (Oxnard, Dry Year)	No. Acres	Total Irrigation Allowance in AF
Spinach	Misc. Veg Single Crop - Summer	1.5	100	150
Celery	Celery	1.6	100	160
Celery	Celery	1.6	100	160
Annual Irrigation Allowance				470
				Total Irrigation Allowance
Irrigation Allowance Converted to AF/Acre				470 AF

In this example, the annual irrigation allowance is 470 AF. We will assume that 400 AF of water was actually applied. The irrigation allowance is computed as follows:

$$Irrigation\ Allowance\ Index = \frac{Water\ Applied}{Irrigation\ Allowance}$$

$$Irrigation\ Allowance\ Index = \frac{400\ AF}{470\ AF}$$

$$Irrigation\ Allowance\ Index = 0.85$$

Here the Irrigation Allowance Index is 0.85, so no surcharge is due; however it isn't known yet if the Agency-wide cap was exceeded.

Because the three crops are rotated and grown on the same 100 acres over the course of the year, the irrigated acres is 100, but the cropped acres is 300. The water application amount relative to the Agency-wide cap is computed this way:

$$Water\ Application = \frac{Water\ Applied}{Irrigated\ Acres}$$

$$Water\ Application = \frac{400\ AF}{100\ Acres}$$

$$Water\ Application = 4.0\ AF/Acre$$

Here the annual water application is 4.0 AF/acre for the irrigated acres and the Agency-wide cap in this zone and year type is 3.5 AF/acre, so the cap was exceeded by 0.5 AF/acre for the 100 acres. Therefore a surcharge would be calculated as 0.5 AF/Acre X 100 Acres = 50 AF.

The current surcharge structure is listed in FCGMA Resolution 2013-03. It states the following:

“Tiered Surcharge Rates are hereby established as follows:

Tier I: A surcharge rate of \$1,315.00 per acre-foot shall be imposed on all groundwater extractions that exceed the combined allocation for all water wells within the Agency by 25 acre-feet or less.

Tier II: An additional surcharge of \$250.00 per acre-foot shall be imposed on all groundwater extractions that exceed the combined allocation for all water wells within the Agency by more than 25 acre-feet but less than 100 acre feet.

Tier III: An additional surcharge of \$500.00 per acre-foot shall be imposed on all groundwater extractions that exceed the combined allocation for all water wells within the Agency by 100 acre-feet or more.”

The surcharge amount in dollars would be calculated as follows:

$$25 \text{ AF} \times \$1,315.00 + 25 \text{ AF} \times \$1565.00 = \$72,000.00$$

Example 2.

During a dry year, an Oxnard Plain grower grows two celery crops on a 100-acre farm.

Crop Name	Crop Type	IA AF/acre (Oxnard, Dry Year)	No. Acres	Total Irrigation Allowance in AF
Celery	Celery	1.6	100	160
Celery	Celery	1.6	100	160
Annual Irrigation Allowance				320
				Total Irrigation Allowance
Irrigation Allowance Converted to AF/Acre				320 AF

In this example, the annual irrigation allowance is 320 AF, and we will assume that 310 AF of water was actually applied. The irrigation allowance is computed as follows:

$$Irrigation\ Allowance\ Index = \frac{Water\ Applied}{Irrigation\ Allowance}$$

$$Irrigation\ Allowance\ Index = \frac{310\ AF}{320\ AF}$$

$$Irrigation\ Allowance\ Index = 0.96$$

Here the Irrigation Allowance Index is 0.96, so no surcharge is due; however it isn't known yet if the Agency-wide cap was exceeded.

Because the two crops are rotated and grown on the same 100 acres over the course of the year, the irrigated acres is 100, but the cropped acres is 200. The water application amount relative to the cap is computed this way:

$$Water\ Application = \frac{Water\ Applied}{Irrigated\ Acres}$$

$$Water\ Application = \frac{310\ AF}{100\ Acres}$$

$$Water\ Application = 3.1\ AF/Acre$$

Here the annual water application is 3.1 AF/acre for the irrigated acres and the Agency-wide cap in this zone and year type is 3.5 AF/acre, so the cap was not exceeded. No surcharge would be due.

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