

WEEKLY SOIL MOISTURE LOSS IN INCHES

(Estimated Crop Evapotranspiration or ET<sub>c</sub>)

09/14/18 through 09/20/18

| Crops (Leafout Date)                                             | #188 Madera II ***         |                                  |                                |  | #39 Parlier                |                                  |                                |  | #86 Lindcove               |                                  |                                |  |
|------------------------------------------------------------------|----------------------------|----------------------------------|--------------------------------|--|----------------------------|----------------------------------|--------------------------------|--|----------------------------|----------------------------------|--------------------------------|--|
|                                                                  | 9/14- 9/20<br>Water<br>Use | Accum'd<br>Seasonal<br>Water Use | 9/21- 9/27<br>Estimated<br>ETc |  | 9/14- 9/20<br>Water<br>Use | Accum'd<br>Seasonal<br>Water Use | 9/21- 9/27<br>Estimated<br>ETc |  | 9/14- 9/20<br>Water<br>Use | Accum'd<br>Seasonal<br>Water Use | 9/21- 9/27<br>Estimated<br>ETc |  |
| Almonds (3/16) *                                                 | 1.31                       | 39.40                            | 1.10                           |  | 1.38                       | 41.13                            | 1.10                           |  | 1.37                       | 39.93                            | 1.10                           |  |
| Pistachio (4/21) * **                                            | 1.38                       | 30.10                            | 1.15                           |  | 1.45                       | 31.92                            | 1.15                           |  | 1.44                       | 31.30                            | 1.15                           |  |
| Citrus (2/1)                                                     | 0.84                       | 30.57                            | 0.68                           |  | 0.87                       | 31.63                            | 0.68                           |  | 0.87                       | 30.64                            | 0.68                           |  |
| Raisin Grapes (3/16 ) (11 ft. row spacing)                       | 1.03                       | 28.63                            | 0.89                           |  | 1.10                       | 29.96                            | 0.89                           |  | 1.09                       | 29.17                            | 0.89                           |  |
| Winegrapes (3/16 ) (10 ft. spacing on California Sprawl Trellis) | 1.17                       | 31.35                            | 0.96                           |  | 1.24                       | 32.92                            | 0.96                           |  | 1.23                       | 32.11                            | 0.96                           |  |
| Walnuts (4/4)                                                    | 1.25                       | 35.14                            | 1.03                           |  | 1.34                       | 36.99                            | 1.03                           |  | 1.35                       | 36.08                            | 1.03                           |  |
| Stone Fruit (3/16 )                                              | 1.38                       | 33.36                            | 1.15                           |  | 1.45                       | 35.20                            | 1.15                           |  | 1.44                       | 34.36                            | 1.15                           |  |
| Past 7 days precipitation (inches)                               | 0.00                       |                                  |                                |  | 0.00                       |                                  |                                |  | 0.00                       |                                  |                                |  |
| Accumulated precipitation (inches) (1/1/2018)                    | 6.33                       |                                  |                                |  | 4.96                       |                                  |                                |  | 3.32                       |                                  |                                |  |

Dates in parentheses above, indicate leaf out or starting date for ET accumulation for the specific crop

\* Estimates are for orchard floor conditions where vegetation is managed by some combination of strip applications of herbicides, frequent mowing or tillage, and by mid and late season shading and water stress. Weekly estimates of soil moisture loss can be as much as 25 percent higher in orchards where cover crops are planted and managed more intensively for maximum growth.

\*\* Very vigorous, non-salt affected peak season pistachio Kc can be as high as 1.19 – resulting in about 8% greater water use than shown in these tables.

\*\*\* CIMIS station #188 Madera II has been taken out of service due to a conversion of the pasture to permanent crops. For the remainder of 2018 irrigation season Historical Average ET<sub>o</sub> will be used for the weekly report.

PAST WEEKLY APPLIED WATER IN INCHES, ADJUSTED FOR EFFICIENCY <sup>1</sup>

| Crops                                                            | #188 Madera II |     |     |     | #39 Parlier |     |     |     | #86 Lindcove |     |     |     |
|------------------------------------------------------------------|----------------|-----|-----|-----|-------------|-----|-----|-----|--------------|-----|-----|-----|
| System Efficiency >>                                             | 65%            | 75% | 85% | 95% | 65%         | 75% | 85% | 95% | 65%          | 75% | 85% | 95% |
| Almonds (3/16)                                                   | 2.0            | 1.7 | 1.5 | 1.4 | 2.1         | 1.8 | 1.6 | 1.5 | 2.1          | 1.8 | 1.6 | 1.4 |
| Pistachio (4/21)                                                 | 2.1            | 1.8 | 1.6 | 1.5 | 2.2         | 1.9 | 1.7 | 1.5 | 2.2          | 1.9 | 1.7 | 1.5 |
| Citrus (2/1)                                                     | 1.3            | 1.1 | 1.0 | 0.9 | 1.3         | 1.2 | 1.0 | 0.9 | 1.3          | 1.2 | 1.0 | 0.9 |
| Raisin Grapes (3/16 ) (11 ft. row spacing)                       | 1.6            | 1.4 | 1.2 | 1.1 | 1.7         | 1.5 | 1.3 | 1.2 | 1.7          | 1.5 | 1.3 | 1.1 |
| Winegrapes (3/16 ) (10 ft. spacing on California Sprawl Trellis) | 1.8            | 1.6 | 1.4 | 1.2 | 1.9         | 1.7 | 1.5 | 1.3 | 1.9          | 1.6 | 1.4 | 1.3 |
| Walnuts (4/4)                                                    | 1.9            | 1.7 | 1.5 | 1.3 | 2.1         | 1.8 | 1.6 | 1.4 | 2.1          | 1.8 | 1.6 | 1.4 |
| Stone Fruit (3/16 )                                              | 2.1            | 1.8 | 1.6 | 1.5 | 2.2         | 1.9 | 1.7 | 1.5 | 2.2          | 1.9 | 1.7 | 1.5 |

<sup>1</sup> The amount of water required by a specific irrigation system to satisfy evapotranspiration. Typical ranges in irrigation system efficiency are: Drip, 80%-95%; Micro-sprinkler, 80%-90%; Sprinkler, 70%-85%; and Border-furrow, 50%-75%.

PAST WEEKLY APPLIED WATER IN GALLON PER TREE OR VINE

| Crops                     | #188 Madera II |     |     |     | #39 Parlier |     |     |     | #86 Lindcove |     |     |     |
|---------------------------|----------------|-----|-----|-----|-------------|-----|-----|-----|--------------|-----|-----|-----|
| Almonds 115 Trees/A       | 472            | 401 | 354 | 331 | 496         | 425 | 378 | 354 | 496          | 425 | 378 | 331 |
| Pistachio 106 Trees/A     | 523            | 448 | 399 | 374 | 548         | 473 | 424 | 374 | 548          | 473 | 424 | 374 |
| Citrus 110 Trees/A        | 321            | 272 | 247 | 222 | 321         | 296 | 247 | 222 | 321          | 296 | 247 | 222 |
| Raisin Grapes 566 Vines/A | 77             | 67  | 58  | 53  | 82          | 72  | 62  | 58  | 82           | 72  | 62  | 53  |
| Winegrapes 622 Vines/A    | 79             | 70  | 61  | 52  | 83          | 74  | 65  | 57  | 83           | 70  | 61  | 57  |
| Walnuts 76 Trees/A        | 679            | 607 | 536 | 464 | 750         | 643 | 572 | 500 | 750          | 643 | 572 | 500 |
| Stonefruit 172 Trees/A    | 332            | 284 | 253 | 237 | 347         | 300 | 268 | 237 | 347          | 300 | 268 | 237 |

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**WEEKLY SOIL MOISTURE LOSS IN INCHES**

(Estimated Crop Evapotranspiration or ET<sub>c</sub>)

09/14/18 through 09/20/18

| Crops (Leafout Date)                                             | #124 Panoche               |                                  |                                |  | #2 Five Points             |                                  |                                |  | #15 Stratford              |                                  |                                |  |
|------------------------------------------------------------------|----------------------------|----------------------------------|--------------------------------|--|----------------------------|----------------------------------|--------------------------------|--|----------------------------|----------------------------------|--------------------------------|--|
|                                                                  | 9/14- 9/20<br>Water<br>Use | Accum'd<br>Seasonal<br>Water Use | 9/21- 9/27<br>Estimated<br>ETc |  | 9/14- 9/20<br>Water<br>Use | Accum'd<br>Seasonal<br>Water Use | 9/21- 9/27<br>Estimated<br>ETc |  | 9/14- 9/20<br>Water<br>Use | Accum'd<br>Seasonal<br>Water Use | 9/21- 9/27<br>Estimated<br>ETc |  |
| Almonds (3/16) *                                                 | 1.34                       | 42.92                            | 1.30                           |  | 1.58                       | 45.59                            | 1.35                           |  | 1.57                       | 45.37                            | 1.37                           |  |
| Pistachio (4/21) * **                                            | 1.41                       | 33.21                            | 1.37                           |  | 1.62                       | 35.01                            | 1.42                           |  | 1.62                       | 34.74                            | 1.44                           |  |
| Citrus (2/1)                                                     | 0.85                       | 33.87                            | 0.81                           |  | 0.98                       | 36.30                            | 0.85                           |  | 0.99                       | 35.97                            | 0.87                           |  |
| Raisin Grapes (3/16 ) (11 ft. row spacing)                       | 1.06                       | 30.76                            | 1.02                           |  | 1.24                       | 32.46                            | 1.07                           |  | 1.25                       | 32.30                            | 1.09                           |  |
| Winegrapes (3/16 ) (10 ft. spacing on California Sprawl Trellis) | 1.20                       | 33.92                            | 1.16                           |  | 1.41                       | 35.84                            | 1.21                           |  | 1.41                       | 35.67                            | 1.23                           |  |
| Walnuts (4/4)                                                    | 1.28                       | 38.41                            | 1.16                           |  | 1.53                       | 40.68                            | 1.21                           |  | 1.53                       | 40.43                            | 1.23                           |  |
| Stone Fruit (3/16 )                                              | 1.41                       | 36.72                            | 1.37                           |  | 1.62                       | 38.88                            | 1.42                           |  | 1.62                       | 38.59                            | 1.44                           |  |
| Past 7 days precipitation (inches)                               | 0.00                       |                                  |                                |  | 0.00                       |                                  |                                |  | 0.00                       |                                  |                                |  |
| Accumulated precipitation (inches) (1/1/2018)                    | 2.56                       |                                  |                                |  | 3.04                       |                                  |                                |  | 1.62                       |                                  |                                |  |

Dates in parentheses above, indicate leaf out or starting date for ET accumulation for the specific crop

\* Estimates are for orchard floor conditions where vegetation is managed by some combination of strip applications of herbicides, frequent mowing or tillage, and by mid and late season shading and water stress. Weekly estimates of soil moisture loss can be as much as 25 percent higher in orchards where cover crops are planted and managed more intensively for maximum growth.

\*\* Very vigorous, non-salt affected peak season pistachio Kc can be as high as 1.19 – resulting in about 8% greater water use than shown in these tables.

**PAST WEEKLY APPLIED WATER IN INCHES, ADJUSTED FOR EFFICIENCY <sup>1</sup>**

| Crops                                                            | #124 Panoche |     |     |     | #2 Five Points |     |     |     | #15 Stratford |     |     |     |
|------------------------------------------------------------------|--------------|-----|-----|-----|----------------|-----|-----|-----|---------------|-----|-----|-----|
| System Efficiency >>                                             | 65%          | 75% | 85% | 95% | 65%            | 75% | 85% | 95% | 65%           | 75% | 85% | 95% |
| Almonds (3/16)                                                   | 2.1          | 1.8 | 1.6 | 1.4 | 2.4            | 2.1 | 1.9 | 1.7 | 2.4           | 2.1 | 1.8 | 1.7 |
| Pistachio (4/21)                                                 | 2.2          | 1.9 | 1.7 | 1.5 | 2.5            | 2.2 | 1.9 | 1.7 | 2.5           | 2.2 | 1.9 | 1.7 |
| Citrus (2/1)                                                     | 1.3          | 1.1 | 1.0 | 0.9 | 1.5            | 1.3 | 1.2 | 1.0 | 1.5           | 1.3 | 1.2 | 1.0 |
| Raisin Grapes (3/16 ) (11 ft. row spacing)                       | 1.6          | 1.4 | 1.2 | 1.1 | 1.9            | 1.7 | 1.5 | 1.3 | 1.9           | 1.7 | 1.5 | 1.3 |
| Winegrapes (3/16 ) (10 ft. spacing on California Sprawl Trellis) | 1.8          | 1.6 | 1.4 | 1.3 | 2.2            | 1.9 | 1.7 | 1.5 | 2.2           | 1.9 | 1.7 | 1.5 |
| Walnuts (4/4)                                                    | 2.0          | 1.7 | 1.5 | 1.3 | 2.4            | 2.0 | 1.8 | 1.6 | 2.4           | 2.0 | 1.8 | 1.6 |
| Stone Fruit (3/16 )                                              | 2.2          | 1.9 | 1.7 | 1.5 | 2.5            | 2.2 | 1.9 | 1.7 | 2.5           | 2.2 | 1.9 | 1.7 |

<sup>1</sup> The amount of water required by a specific irrigation system to satisfy evapotranspiration. Typical ranges in irrigation system efficiency are: Drip, 80%-95%; Micro-sprinkler, 80%-90%; Sprinkler, 70%-85%; and Border-furrow, 50%-75%.

**PAST WEEKLY APPLIED WATER IN GALLON PER TREE OR VINE**

| Crops                     | #124 Panoche |     |     |     | #2 Five Points |     |     |     | #15 Stratford |     |     |     |
|---------------------------|--------------|-----|-----|-----|----------------|-----|-----|-----|---------------|-----|-----|-----|
| Almonds 115 Trees/A       | 496          | 425 | 378 | 331 | 567            | 496 | 449 | 401 | 567           | 496 | 425 | 401 |
| Pistachio 106 Trees/A     | 548          | 473 | 424 | 374 | 623            | 548 | 473 | 424 | 623           | 548 | 473 | 424 |
| Citrus 110 Trees/A        | 321          | 272 | 247 | 222 | 370            | 321 | 296 | 247 | 370           | 321 | 296 | 247 |
| Raisin Grapes 566 Vines/A | 77           | 67  | 58  | 53  | 91             | 82  | 72  | 62  | 91            | 82  | 72  | 62  |
| Winegrapes 622 Vines/A    | 79           | 70  | 61  | 57  | 96             | 83  | 74  | 65  | 96            | 83  | 74  | 65  |
| Walnuts 76 Trees/A        | 715          | 607 | 536 | 464 | 857            | 715 | 643 | 572 | 857           | 715 | 643 | 572 |
| Stonefruit 172 Trees/A    | 347          | 300 | 268 | 237 | 395            | 347 | 300 | 268 | 395           | 347 | 300 | 268 |

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