

**TABLE I**

CONIFER TREES CLASSIFIED BY STRESS CATEGORIES

| <u>Low Stress Conifer</u> | <u>Medium Stress Conifer</u> | <u>High Stress Conifer</u> |
|---------------------------|------------------------------|----------------------------|
| Loblolly Pine             | Douglas Fir                  | Juniper                    |
| Western Red Cedar         | Western Hemlock              | Digger Pine                |
| Shasta Red Fir            | Western Larch                | Incense Cedar              |
| Noble Fir                 | White Fir                    |                            |
| Pacific Silver Fir        | Ponderosa Pine               |                            |
| Engleman Spruce           | Lodgepole Pine               |                            |
|                           | White Spruce                 |                            |
|                           | Sugar Pine                   |                            |
|                           | Western White Pine           |                            |

**TABLE II**

ESTIMATED PLANT MOISTURE STRESS RESPONSES FOR CATEGORIES OF CONIFER TREES MEASURED IN BAR

**TYPICAL RANGE IN PMS LEVELS    PLANT RESPONSE TO STRESS**  
**(MIN/MAX)\* (BAR)**

| <b>Low Stress Conifers</b> | <b>Medium Stress Conifers</b> | <b>High Stress Conifers</b> |  |
|----------------------------|-------------------------------|-----------------------------|--|
| 5/8                        | 7/10                          | 10/12                       | Growth not limited by water, supply adequate, maintains maximum shoot growth.  |
| 10/12                      | 10/15                         | 17/20                       | Slight to moderate shoot growth reductions. PMS changes rapidly in changing environment. Irrigate to maximize growth and productivity. Stress limits phloem transport, leaf expansion and diameter growth. |
| 12/14                      | 15/20                         | 20/25                       | Stomata close, shoot growth stops. Growth rate declining overall. Irrigate to maintain growth. This level of PMS required for stress response, i.e. to limit vegetative growth or stimulate flowering.     |

\* PMS GIVEN AS RANGE FROM PREDAWN (BEFORE SUNRISE) TO MID-DAY STRESS LEVELS